Biological and Oceanographic Data from the Harmful Algae Monitoring Program Associated with Salmon Farm Sites on the West Coast of Canada in 1999

N. Haigh, J.N.C. Whyte, and K.L. Sherry

Fisheries and Oceans Canada
Science Branch, Pacific Region
Pacific Biological Station
Nanaimo, BC
V9T 6N7

2004

Canadian Data Report of Fisheries and Aquatic Sciences 1154

Fisheries and Oceans Canada Pêches et Océans Canada

Canada

Canadian Data Report of Fisheries and Aquatic Sciences

Data reports provide a medium for filing and archiving data compilations where little or no analysis is included. Such compilations commonly will have been prepared in support of other journal publications or reports. The subject matter of data reports reflects the broad interests and policies of the Department of Fisheries and Oceans, namely, fisheries and aquatic sciences.

Data reports are not intended for general distribution and the contents must not be referred to in other publications without prior written authorization from the issuing establishment. The correct citation appears above the abstract of each report. Data reports are abstracted in *Aquatic Sciences and Fisheries Abstracts* and indexed in the Department's annual index to scientific and technical publications.

Numbers 1 - 25 in this series were issued as Fisheries and Marine Service Data Records. Numbers 26 - 160 were issued as Department of Fisheries and the Environment, Fisheries and Marine Service Data Reports. The current series name was introduced with the publication of report number 161.

Data reports are produced regionally but are numbered nationally. Requests for individual reports will be filled by the issuing establishment listed on the front cover and title page. Out-of-stock reports will be supplied for a fee by commercial agents.

Rapport statistique canadien des sciences halieutiques et aquatiques

Les rapports statistiques servent à classer et à archiver les compilations de données pour lesquelles il y a peu ou point d'analyse. Ces compilations auront d'ordinaire été préparées à l'appui d'autres publications ou rapports. Les sujets des rapports statistiques reflètent la vaste gamme des intérêts et des politiques du ministère des Pêches et des Océans, c'est-à-dire les sciences halieutiques et aquatiques.

Les rapports statisiques ne sont pas destinés à une vaste distribution et leur contenu ne doit pas être mentionné dans une publication sans autorisation écrite préalable de l'établissement auteur. Le titre exact paraît au-dessus du résumé de chaque rapport. Les rapports statisiques sont résumés dans la revue *Résumés des sciences aquatiques et halieutiques*, et ils sont classés dans l'index annuel des publications scientifiques et techniques du Ministère.

Les numéros 1 à 25 de cette série ont été publiés à titre de relevés statistiques, Services des pêches et de la mer. Les numéros 26 à 160 ont été publiés à titre de rapports statistiques du Service des pêches et de la mer, ministère des Pêches et de l'Environnement. Le nom actuel de la série a été établi lors de la parution du numéro 161.

Les rapports statistiques sont produits à l'échelon régional, mais numérotés à l'échelon national. Les demandes de rapports seront satisfaites par l'établissement auteur dont le nom figure sur la couverture et la page du titre. Les rapports épuisés seront fournis contre rétribution par des agents commerciaux.

105-02114/

Canadian Data Report of
Fisheries and Aquatic Sciences 1154

2004

BIOLOGICAL AND OCEANOGRAPHIC DATA FROM THE HARMFUL ALGAE MONITORING PROGRAM ASSOCIATED WITH SALMON FARM SITES ON THE WEST COAST OF CANADA IN 1999

by

N. Haigh, J.N.C. Whyte, and K.L. Sherry

Fisheries and Oceans Canada
Pacific Region
Pacific Biological Station
Nanaimo, British Columbia
V9T 6N7

© Her Majesty the Queen in Right of Canada, 2004
Cat. No. Fs 97-13/1154E ISSN 0706-6465

Correct citation for this publication:

Haigh, N., Whyte, J.N.C., and Sherry, K.L. 2004. Biological and oceanographic data from the harmful algae monitoring program associated with salmon farm sites on the west coast of Canada in 1999. Can. Data Rep. Fish. Aquat. Sci. 1154: 157 p.

TABLE OF CONTENTS

ABSTRACT iv

RÉSUMÉ iv

ACKNOWLEDGEMENTS v

INTRODUCTION 1

MATERIALS AND METHODS
- Plankton sample collection 2
- Plankton sample analysis 2
- Counting technique 2
- Environmental monitoring 3
- Nutrient sample collection and analysis 3

RESULTS FROM SAMPLES COLLECTED DURING 1999
- Biological parameters at specific sites; list of tables 3
- Harmful or potentially harmful phytoplankton species at specific sites; list of figures 5
- Environmental parameters at specific sites; list of figures 6
- Water nutrient parameters at specific sites; list of figures 6

ABSTRACT

Haigh, N., Whyte, J.N.C., and Sherry, K.L. 2004. Biological and oceanographic data from the harmful algae monitoring program associated with salmon farm sites on the west coast of Canada in 1999. Can. Data Rep. Fish. Aquat. Sci. 1154: 157 p.

The Harmful Algae Monitoring Program was initiated in 1999 by Fisheries and Oceans Canada in collaboration with the salmon aquaculture industry in British Columbia. Sampling done weekly at farm sites provided data on: phytoplankton species, including those harmful or potentially harmful to finfish; phytoplankton biomass and dominant groups; nutrient (nitrate, phosphate and silicate) levels; and environmental parameters such as temperature, salinity, and dissolved oxygen. In 1999 the sampling period was from mid-June to late October, and 18 sites around Vancouver Island were monitored.

RÉSUMÉ

Haigh, N., Whyte, J.N.C., and Sherry, K.L. 2004. Biological and oceanographic data from the harmful algae monitoring program associated with salmon farm sites on the west coast of Canada in 1999. Can. Data Rep. Fish. Aquat. Sci. 1154: 157 p.

Le programme de surveillance des algues toxiques a été initié en 1999 par Pêches et Océans Canada en collaboration avec l'industrie aquicole de la Colombie Britannique. Un échantillonnage hebdomadaire aux sites de mariculture a fourni des données sur la composition des espèces phytoplanctoniques, incluant les algues toxiques ou potentiellement nocives aux poissons, ainsi que sur la biomasse phytoplanctonique et les groupes dominants, les niveaux des sels nutritifs (nitrate, phosphate, silicate), et les paramètres environnementaux tels la température, salinité, et l'oxygène dissous. En 1999, la période d'échantillonnage était de la mi-juin à la fin octobre, et 18 sites autour de l'île de Vancouver ont été échantillonnés.

ACKNOWLEDGEMENTS

The Harmful Algae Monitoring Program was funded by the salmon aquaculture industry in British Columbia. In 1999 companies contributing to the program were Pacific Aqua Sea Foods, Stolt Sea Farm, and Omega Salmon Group. We would like to acknowledge this support, and the efforts of company personnel who helped to get this program up and running, in particular Terry Nielsen and Darrell Volker of PASF. We would also like to thank the farm personnel who carried out the sampling at the monitoring sites and who communicated with us in the instances of harmful algal blooms at salmon aquaculture operations around the coast of British Columbia.

INTRODUCTION

The Harmful Algae Monitoring Program (HAMP) was started in the summer of 1999 with the motivation of Terry Nielsen and Darrell Volker of Pacific Aqua Salmon Farmers (PASF), in co-operation with Dr J.N.C. (Ian) Whyte of Fisheries and Oceans Canada and Nicky Haigh. In 1999 three farm companies (Omega Salmon Group, Stolt Sea Farm, and PASF) took part in the program, with 18 sites around Vancouver Island sampled weekly from mid-June to the end of October. Figure 1 shows the HAMP sampling sites in 1999.

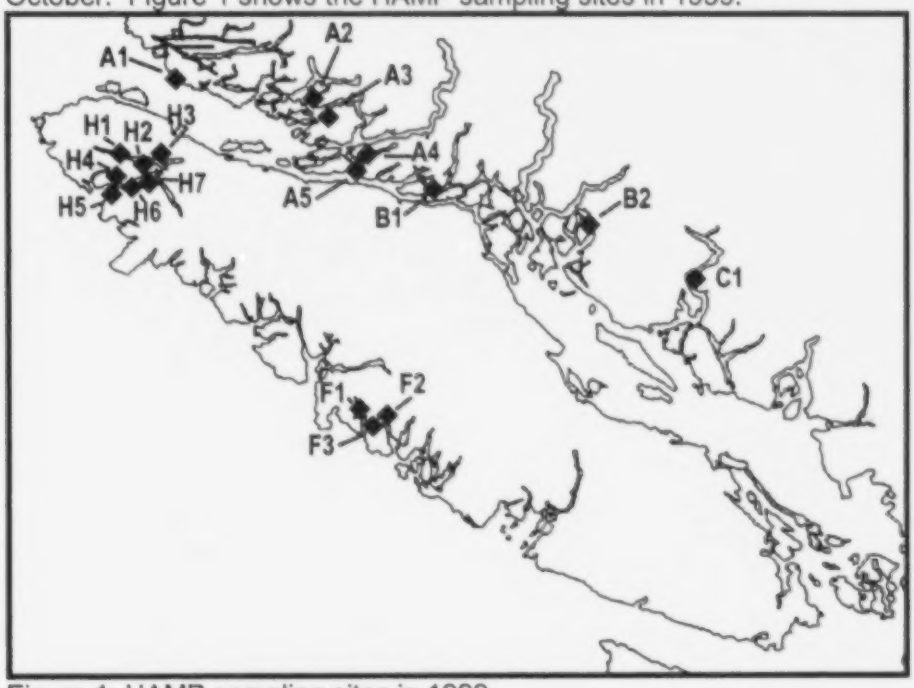

Figure 1: HAMP sampling sites in 1999.

A1	Shelter Bay	B2	Homfray Creek	H2	Thorpe Point
A2	Simoom Sound	C1	Glacial Creek	H3	Coal Harbour
A3	Viner Sound	F1	Pretty Girl Cove	H4	Koprino Harbour
A4	Warren Islands	F2	Bacchante Bay	H5	Koskimo Bay
A5	Boughy Bay	F3	Shelter Channel	H6	Cleagh Creek
B1	Chancellor Channel	H1	Michaelson Rocks	H7	Kultus Cove

This report summarises in tables, figures and graphs the data for the HAMP samples collected in 1999. Tables present the results of analyses for phytoplankton species, dominant species name and counts, estimated total phytoplankton biomass, and percentage of sample biomass in five constituent groups: diatoms, dinoflagellates, raphidophytes, other flagellates, and microzooplankton. The presence of algal species that are harmful or potentially harmful to fish are illustrated in figures for each site monitored. For sites where environmental parameters were provided by the farm companies, graphs of

water temperature, dissolved oxygen (DO), and salinity are presented collectively as a figure for each site. Similarly, water nutrient parameters as concentrations of silicate, phosphate, and nitrate are graphically illustrated for sites where samples were collected in 1999 (Simoom Sound, Boughy Bay, Homfray Creek, Pretty Girl Cove, Thorpe Point, and Kultus Cove).

MATERIALS AND METHODS

PLANKTON SAMPLE COLLECTION

Samples for analyses were collected weekly by farm site personnel. Discrete 100 mL water samples were collected, usually using home-made sampling bottles, from 1m, 5m, and 10 metre depths, and were preserved with Lugol's iodine solution. Samples were then forwarded by courier to the Pacific Biological Station (PBS) in Nanaimo.

PLANKTON SAMPLE ANALYSIS

Plankton samples were analysed typically on the day water samples were received. Samples were resuspended by mixing gently, and a 1 mL aliquot was pipetted into a plastic Sedgewick Rafter cell and allowed to settle for at least five minutes. The whole rafter slide was scanned using a Leitz Wetzlas Dialux microscope: the first 20% of the slide was examined at 100X magnification, and the remainder at 40X, shifting up to 100X when necessary to aid identification of species. All species were identified to highest practicable level, and registered on data sheets. Non-harmful or difficult to differentiate species were sometimes grouped into genus or type (e.g. *Thalassiosira* species as diatoms were grouped together, and gymnodinioid type dinoflagellates were grouped together). In the data sheets each species in the genus or group were given a mark in the corresponding box. If harmful species were present in the sample a count was made of those species (see "Counting Technique"). The dominant species or group in each sample was identified and counted. Total biomass in the sample was estimated on a scale of 1 (very low) to 5 (very high). Proportion of total biomass in each of five groups (diatoms, dinoflagellates, raphidophytes, other flagellates, and microzooplankton) was approximated. Analysis of each sample usually took 20-40 minutes.

COUNTING TECHNIQUE

Most enumeration data from 1999 HAMP algae samples are approximate counts, with less than 100 cells counted for the calculation of cells/mL. In sample data after September 2000, a tilde (~) was used to differentiate approximate counts from "more accurate counts", where more than 100 cells of the species or group in question were enumerated. However, before this counting standard was instituted most counts must be assumed to be approximate, and only those

where cell concentrations are 1000 cells/mL or greater are likely to be calculated from counts of 100 cells or more. Enumeration of harmful algal species often produced approximate counts, as levels were generally less than 100 cells/mL except during blooms, and analysis time constraints usually made it impracticable to count the alga in more than a few rows of the slides.

ENVIRONMENTAL MONITORING

Data sheets for environmental monitoring were provided to the HAMP participant companies. These sheets were to be completed with water temperature, salinity, dissolved oxygen, and other environmental data for the sampling depths at the time and place HAMP samples were taken. This data was then to be sent to PBS for compilation and archiving. This data collection was done to varying degrees by different farm companies and at different sampling sites.

NUTRIENT SAMPLE COLLECTION AND ANALYSIS

Certain HAMP sites were selected for nutrient sampling based on siting and company participation; this sampling was done concurrent with that for phytoplankton analysis. Particulate matter was filtered out using Fisherbrand G4 microfibre filters (1.2 µm particle retention size) in Swinnex holders attached to 60 mL plastic syringes; filtrate was frozen in 30 mL acid-washed HDPE Nalgene bottles for later analysis. At the end of the sampling season, all collected and preserved samples were analysed for nitrate (including nitrite), phosphate and silicate concentrations using a Technicon AutoAnalyzer.

RESULTS FROM SAMPLES COLLECTED DURING 1999

BIOLOGICAL PARAMETERS AT SPECIFIC SITES; LIST OF TABLES

Table 1. Diatoms in Shelter Bay samples, ... 7
Table 2. Dinoflagellates in Shelter Bay samples..... 8
Table 3. Other flagellates, microzooplankton, dominant species, % constituent, and total biomass in Shelter Bay samples..... 9
Table 4. Diatoms in Simoom Sound samples,..... 10
Table 5. Dinoflagellates in Simoom Sound samples..... 12
Table 6. Other flagellates, microzooplankton, dominant species, % constituent, and total biomass in Simoom Sound samples..... 14
Table 7. Diatoms in Viner Sound samples..... 16
Table 8. Dinoflagellates in Viner Sound samples..... 18
Table 9. Other flagellates, microzooplankton, dominant species, % constituent, and total biomass in Viner Sound samples..... 20
Table 10. Diatoms in Warren Islands samples..... 22
Table 11. Dinoflagellates in Warren Islands samples..... 24

Table 12. Other flagellates, microzooplankton, dominant species, % constituent, and total biomass in Warren Islands samples.....26
Table 13. Diatoms in Boughy Bay samples..... 28
Table 14. Dinoflagellates in Boughy Bay samples.....30
Table 15. Other flagellates, microzooplankton, dominant species, % constituent, and total biomass in Boughy Bay samples..... 32
Table 16. Diatoms in Chancellor Channel samples..... 34
Table 17. Dinoflagellates in Chancellor Channel samples.....36
Table 18. Other flagellates, microzooplankton, dominant species, % constituent, and total biomass in Chancellor Channel samples.....38
Table 19. Diatoms in Homfray Creek samples..... 40
Table 20. Dinoflagellates in Homfray Creek samples.....42
Table 21. Other flagellates, microzooplankton, dominant species, % constituent, and total biomass in Homfray Creek samples.....44
Table 22. Diatoms in Glacial Creek samples..... 46
Table 23. Dinoflagellates in Glacial Creek samples..... 48
Table 24. Other flagellates, microzooplankton, dominant species, % constituent, and total biomass in Glacial Creek samples..... 50
Table 25. Diatoms in Pretty Girl Cove samples..... 52
Table 26. Dinoflagellates in Pretty Girl Cove samples..... 54
Table 27. Other flagellates, microzooplankton, dominant species, % constituent, and total biomass in Pretty Girl Cove samples.....56
Table 28. Diatoms in Bacchante Bay samples..... 58
Table 29. Dinoflagellates in Bacchante Bay samples..... 60
Table 30. Other flagellates, microzooplankton, dominant species, % constituent, and total biomass in Bacchante Bay samples.....62
Table 31. Diatoms in Shelter Channel samples.....64
Table 32. Dinoflagellates in Shelter Channel samples.....66
Table 33. Other flagellates, microzooplankton, dominant species, % constituent, and total biomass in Shelter Channel samples.....68
Table 34. Diatoms in Michaelson Rocks samples.....70
Table 35. Dinoflagellates in Michaelson Rocks samples.....72
Table 36. Other flagellates, microzooplankton, dominant species, % constituent, and total biomass in Michaelson Rocks samples.....74
Table 37. Diatoms in Thorpe Point samples..... 76
Table 38. Dinoflagellates in Thorpe Point samples..... 78
Table 39. Other flagellates, microzooplankton, dominant species, % constituent, and total biomass in Thorpe Point samples.....80
Table 40. Diatoms in Coal Harbour samples..... 82
Table 41. Dinoflagellates in Coal Harbour samples.....84
Table 42. Other flagellates, microzooplankton, dominant species, % constituent, and total biomass in Coal Harbour samples.....86
Table 43. Diatoms in Koprino Harbour samples..... 88
Table 44. Dinoflagellates in Koprino Harbour samples..... 90
Table 45. Other flagellates, microzooplankton, dominant species, % constituent, and total biomass in Koprino Harbour samples.....92

Table 46. Diatoms in Koskimo Bay samples..... 94
Table 47. Dinoflagellates in Koskimo Bay samples..... 96
Table 48. Other flagellates, microzooplankton, dominant species, % constituent, and total biomass in Koskimo Bay samples..... 98
Table 49. Diatoms in Cleagh Creek samples..... 100
Table 50. Dinoflagellates in Cleagh Creek samples..... 102
Table 51. Other flagellates, microzooplankton, dominant species, % constituent, and total biomass in Cleagh Creek samples..... 104
Table 52. Diatoms in Kultus Cove samples..... 106
Table 53. Dinoflagellates in Kultus Cove samples..... 108
Table 54. Other flagellates, microzooplankton, dominant species, % constituent, and total biomass in Kultus Cove samples.....110

HARMFUL OR POTENTIALLY HARMFUL PHYTOPLANKTON SPECIES AT SPECIFIC SITES; LIST OF FIGURES

Figure 2. Harmful phytoplankton species in Shelter Bay samples.....112
Figure 3. Harmful phytoplankton species in Shelter Bay samples..... 113
Figure 4. Harmful phytoplankton species in Simoom Sound samples..... 114
Figure 5. Harmful phytoplankton species in Simoom Sound samples..... 115
Figure 6. Harmful phytoplankton species in Viner Sound samples..... 116
Figure 7. Harmful phytoplankton species in Viner Sound samples..... 117
Figure 8. Harmful phytoplankton species in Warren Islands samples..... 118
Figure 9. Harmful phytoplankton species in Warren Islands samples..... 119
Figure 10. Harmful phytoplankton species in Boughy Bay samples..... 120
Figure 11. Harmful phytoplankton species in Boughy Bay samples..... 121
Figure 12. Harmful phytoplankton species in Chancellor Channel samples... 122
Figure 13. Harmful phytoplankton species in Chancellor Channel samples... 123
Figure 14. Harmful phytoplankton species in Homfray Creek samples..... 124
Figure 15. Harmful phytoplankton species in Homfray Creek samples..... 125
Figure 16. Harmful phytoplankton species in Glacial Creek samples..... 126
Figure 17. Harmful phytoplankton species in Glacial Creek samples.....127
Figure 18. Harmful phytoplankton species in Pretty Girl Cove samples..... 128
Figure 19. Harmful phytoplankton species in Pretty Girl Cove samples..... 129
Figure 20. Harmful phytoplankton species in Bacchante Bay samples..... 130
Figure 21. Harmful phytoplankton species in Bacchante Bay samples..... 131
Figure 22. Harmful phytoplankton species in Shelter Channel samples..... 132
Figure 23. Harmful phytoplankton species in Shelter Channel samples..... 133
Figure 24. Harmful phytoplankton species in Michaelson Rocks samples..... 134
Figure 25. Harmful phytoplankton species in Michaelson Rocks samples... 135
Figure 26. Harmful phytoplankton species in Thorpe Point samples..... 136
Figure 27. Harmful phytoplankton species in Thorpe Point samples..... 137
Figure 28. Harmful phytoplankton species in Coal Harbour samples..... 138
Figure 29. Harmful phytoplankton species in Coal Harbour samples.....139
Figure 30. Harmful phytoplankton species in Koprino Harbour samples..... 140
Figure 31. Harmful phytoplankton species in Koprino Harbour samples... 141

Figure 32. Harmful phytoplankton species in Koskimo Bay samples..... 142
Figure 33. Harmful phytoplankton species in Koskimo Bay samples..... 143
Figure 34. Harmful phytoplankton species in Cleagh Creek samples..... 144
Figure 35. Harmful phytoplankton species in Cleagh Creek samples..... 145
Figure 36. Harmful phytoplankton species in Kultus Cove samples..... 146
Figure 37. Harmful phytoplankton species in Kultus Cove samples..... 147

ENVIRONMENTAL PARAMETERS AT SPECIFIC SITES; LIST OF FIGURES

Figure 38. Environmental monitoring data for Pretty Girl Cove..... 148
Figure 39. Environmental monitoring data for Bacchante Bay 149
Figure 40. Environmental monitoring data for Shelter Channel..... 150
Figure 41. Environmental monitoring data for Thorpe Point..... 151

WATER NUTRIENT PARAMETERS AT SPECIFIC SITES; LIST OF FIGURES

Figure 42. Nutrient concentrations in Simoom Sound samples..... 152
Figure 43. Nutrient concentrations in Boughy Bay samples..... 153
Figure 44. Nutrient concentrations in Homfray Creek samples..... 154
Figure 45. Nutrient concentrations in Pretty Girl Cove samples..... 155
Figure 46. Nutrient concentrations in Thorpe Point samples..... 156
Figure 47. Nutrient concentrations in Kultus Cove samples..... 157

Table 1: Diatoms in Shelter Bay samples.

date	08-Jul			15-Jul			22-Jul			19-Aug			26-Aug			02-Sep			16-Sep			23-Sep			30-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																											
Achnanthes sp.																									1		
Amphiproral Tropidoneis																											
Asterionella japonica																											
Bacteriastrum sp.																											
Biddulphia sp.																										1	
Campylosira/Plagiogramma																					1						
Cerautalina sp.				1	1	1			1																		
Chaetoceros concavicorne																											
Chaetoceros convolutus								1	1															1			
Chaetoceros sp.				3	3	6	5	6	5	3	2	1	6	3	5		1	3				3	3	5		1	
Corethron hystrix																											
Coscinodiscus sp.								1																			
Dactylisolen sp.																								1			
Ditylum brightwellii							1		1				1									1	1	1	1		
Eucampia zoodiacus																						1					
Grammatophora sp.																											
Hemialus sp.																											
Lauderia annulata								1																			
Leptocylindrus danicus							1											1				1	1	1			
Leptocylindrus minimus																											
Licmophora sp.				1			1																1		1	1	
Melosira sp.				1	1	1	1	1	1					1			1										
Navicula sp.					1	2	1	1					1		1				1	2	1		1	1		1	1
Nitzschioid sp.	1			1	1		2	1	1	1			1	2	1							1	2	1	1	1	
Pleurosigma/ Gyrosigma sp.																											
Rhizosolenia setigera					1						1		1	1	1			1				1	1	1			
Rhizosolenia sp.																								1			
Rhizosolenia stolterfothii																											1
Skeletonema costatum		1		1	1	1	1	1	1	1	1	1	1	1	1	1			1		1	1	1	1	1	1	1
Stephanopyxis sp.						1																					
Thalassionema sp.		1	1	1	1		1						1							1		1	1	1	1		1
Thalassiosira sp.	1	1	1	2	2	2	2	2	2	2	1		1	2	1			1		1	2	3	2	2	3	3	2

Table 2: Dinoflagellates in Shelter Bay samples.

date	08-Jul			15-Jul			22-Jul			19-Aug			26-Aug			02-Sep			16-Sep			23-Sep			30-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																											
Alexandrium sp.																											
Amphidinium sp.																							1				
Ceratium divericatum																											
Ceratium furca																											
Ceratium fusus																											
Ceratium lineatum																											
Ceratium pentagonum																											
Ceratium sp.																											
Cochlodinium sp.																											
Cochlodinium sp. 99																											
Dinophysioid sp.														1			1										
Gonyaulacoid sp.				1		1												1									
Gymnodinioid sp.	1	2	1	1	3	2	2	2			1		2	2	1	2		2	3	4	2	4	2	1	2	2	2
Gymnodinium galatheanum																											
Gyrodinium spirale-type					1		1	1									1							1	1		
Heterocapsa triquetra					1															1							
Noctiluca scintillans																											
Noctilucoid sp.																											
Oxyrrhis marina																											
Oxytoxum sp.																											
Polykrikos sp.							1		1																		
Prorocentrum gracile																			1								
Prorocentrum micans																				1				1			
Prorocentrum sp.																											1
Protoperidinioid sp.	2	1		7	1		3	1	1	1					2				1	1	2	3	2		1		1
Pyrocystis lunula																											
Raphidophytes																											
Heterosigma akashiwo							1			1						1	1	1									

Table 3 : Other flagellates, microzooplankton, dominant species, percent constituent, and total biomass in Shelter Bay samples.

date	08-Jul			15-Jul			22-Jul			19-Aug			26-Aug			02-Sep			16-Sep			23-Sep			30-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																											
Cryptomonads																											
Dictyocha speculum		1		1	1	1		1	1	1	1											1			1		1
Dinobryon balticum																											
Ebria tripartita																											
Euglenoid		1														1				1							
Phaeocystis pouchetii																											
Radiolarian																											
unid. Nanoflagellates	2	2	2	3	2	3	3	2	3	3	4	2	2	2	3	3	3	3	3	3	3	3	2	4	2	2	3
Zooplankton																											
Appendicularian																											
Ciliate	3	1	2	5	5	5	1	1	3	1	1		1	4	3	2	5	4	6	5	3		2	4	1		3
Copepod																											
Nauplius																1											
Pluteus	1			1			1																				
Rotifer													1														
Tintinnid																1											
Zoea																											
other																											
Dominant Species/Group																											
name	diatoms	diatoms	*Thalassionema nitzschioides*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	diatoms	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	zooplankton	ciliates	diatoms	dinoflagellates	ciliates	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Thalassiosira spp.*	*Thalassiosira spp.*	*Rhizosolenia stolterfothii*
count (cells/mL)	20	10	9	2900	600	200	3000	7000	3600	660	~200	~100	1500	800	900	4	6	30	~15	~20	~40	3200	3200	3700	~100	~50	28
% constituent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Diatoms	35	50	60	78	78	83	80	91	88	96	96	99	93	80	80	20	20	55	25	15	50	85	85	85	85	90	65
Dinoflagellates	30	20	5	15	10	5	10	5	5	1	1	0	2	10	10	20	20	10	35	30	25	13	10	8	10	9	14
Raphidophytes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	5	1	0	0	0	0	0	0	0	0	0
Other Flagellates	10	20	25	2	2	2	5	2	2	1	1	1	1	1	1	20	5	5	10	10	5	2	2	2	1	1	1
Zooplankton	25	10	10	5	10	10	5	2	5	2	2	0	4	9	9	30	50	29	30	45	20	0	3	5	4	0	20
Biomass										3.0	2.5	1.5	3.0	2.0	2.0	1.5	1.5	1.5	2.0	2.0	1.5	3.5	3.5	3.5	2.5	2.0	1.5

Table 4 : Diatoms in Simoom Sound samples.

date	02-Jul			14-Jul			20-Jul			27-Jul			03-Aug			10-Aug			17-Aug			24-Aug			31-Aug			07-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																														
Achnanthes sp.																														
Amphiprora/ Tropidoneis																														
Asterionella japonica																														
Bacteriastrum sp.																														
Biddulphia sp.															1															
Campylosira/Plagiogramma																														
Cerautalina sp.	1		1																											
Chaetoceros concavicorne																														
Chaetoceros convolutus								1	1		1						1				1									
Chaetoceros sp.	3	3	3	3	4	4	2	7	5	1	5	1	4	4	6	3	5	3	4	7	4	4	4		6	1	3	4	2	3
Corethron hystrix																														
Coscinodiscus sp.																														
Dactylisolen sp.																														
Ditylum brightwellii																									1					
Eucampia zoodiacus																														
Grammatophora sp.																														
Hemialus sp.																														
Lauderia annulata																														
Leptocylindrus danicus		1						1	1									1							1	1		1	1	1
Leptocylindrus minimus										1	1					1			1	1		1			1			1	1	1
Licmophora sp.																														
Melosira sp.											1																			
Navicula sp.						1								1			1		1	1			1		1					
Nitzschioid sp.	1			2	1		2	1	1		2		1	2	1	2	2		2	1		1	1		1	1	1	1	2	2
Pleurosigma/ Gyrosigma sp.																														
Rhizosolenia setigera							1															1	1					1		1
Rhizosolenia sp.	1													1										1		1				
Rhizosolenia stolterfothii																														
Skeletonema costatum	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Stephanopyxis sp.																														
Thalassionema sp.	1	1		1	1	1	1		1	1	1	1			1		1			1					1	1		1	1	
Thalassiosira sp.	1	1		1		1	1	1	1	1	1		1	1	1		1	2		1	1			1	1		1	3	3	1

Table 4 cont'd

date	14-Sep			21-Sep			28-Sep			05-Oct			12-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms															
Achnanthes sp.															
Amphiproral Tropidoneis															
Asterionella japonica															
Bacteriastrum sp.															
Biddulphia sp.										1					
Campylosira/Plagiogramma															
Cerautalina sp.										1	1				
Chaetoceros concavicorne															
Chaetoceros convolutus															
Chaetoceros sp.	1	4	2	2	3			1	3	5	7	3	2	1	
Corethron hystrix															
Coscinodiscus sp.							1	1					1		
Dactylisolen sp.				1	1	1				1					
Ditylum brightwellii		1													
Eucampia zoodiacus						1				1	1		1		
Grammatophora sp.															
Hemialus sp.															
Lauderia annulata															
Leptocylindrus danicus		1				1	1	1	1	1	1	1		1	
Leptocylindrus minimus	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Licmophora sp.															
Melosira sp.															
Navicula sp.											1				
Nitzschioid sp.		3	1	1	1	1	2	3	1	2	1	3			2
Pleurosigma/ Gyrosigma sp.										1					
Rhizosolenia setigera			1												
Rhizosolenia sp.			1		1	2		1	1	1	1	1	1	1	1
Rhizosolenia stolterfothii															
Skeletonema costatum	1	1	1	1	1	1		1	1	1	1	1	1	1	1
Stephanopyxis sp.															
Thalassionema sp.	1	1		1	1					1				1	
Thalassiosira sp.	2	4	3	2	2	1	2	3	2	2	3	2	3	2	2

Table 5 : Dinoflagellates in Simoom Sound samples.

date	02-Jul			14-Jul			20-Jul			27-Jul			03-Aug			10-Aug			17-Aug			24-Aug			31-Aug			07-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																														
Alexandrium sp.							1			1		1	1	1	1	1	1		1	1								1	1	
Amphidinium sp.	1	1												1						1	1									
Ceratium divericatum																														
Ceratium furca																														
Ceratium fusus					1			1			1	1		1	1		1			1			1			1			1	1
Ceratium lineatum																														
Ceratium pentagonum																														
Ceratium sp.																														
Cochlodinium sp.																														
Cochlodinium sp. 99											1	1	1		1	1	1											1		
Dinophysioid sp.		2			1															1								1		
Gonyaulacoid sp.				1	1																									
Gymnodinioid sp.	5	5		4	3		4	7	3	7	10	5	5	7	3	6	7	3	7	7	2	2	4	3	5	3	1	6	4	1
Gymnodinium galatheanum																														
Gyrodinium spirale-type		2			2				1		1	2	2	1	1		1		1		1						1			
Heterocapsa triquetra	1	1			1						1														1					
Noctiluca scintillans		1		1	1						1			1			1	1		1			1	1					1	1
Noctilucoid sp.				1									1	1															1	
Oxyrrhis marina							1	1														1			1					
Oxytoxum sp.																												1		
Polykrikos sp.								1																						
Prorocentrum gracile				1	1																	1			1					
Prorocentrum micans																														
Prorocentrum minimum																1														
Prorocentrum sp.																														
Protoperidinioid sp.	6	3	2	5	6	1	7	4	1	2	7	2	4	4	2	5	3		5	7		3	5	1	3	3		3	4	
Pyrocystis lunula																														
Raphidophytes																														
Heterosigma akashiwo																												1		

Table 5 cont'd

date	14-Sep			21-Sep			28-Sep			05-Oct			12-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates															
Alexandrium sp.				1	1	1	1	1	1			1			
Amphidinium sp.		1													
Ceratium divericatum															
Ceratium furca															
Ceratium fusus		1	1		1				1				1		
Ceratium lineatum															
Ceratium pentagonum															
Ceratium sp.															
Cochlodinium sp.															
Cochlodinium sp. 99													1		
Dinophysioid sp.															
Gonyaulacoid sp.										1					
Gymnodinioid sp.	6	5	2	5	6	3	5	6	2	8	6	5	7	4	4
Gymnodinium galatheanum															
Gyrodinium spirale-type	2	2		2	2	2	2	1	2	1		2	2		
Heterocapsa triquetra					1					1			1		
Noctiluca scintillans	1	1				1		1	1				1		
Noctilucoid sp.															
Oxyrrhis marina					1										
Oxytoxum sp.															
Polykrikos sp.															
Prorocentrum gracile				1			1								
Prorocentrum micans															
Prorocentrum minimum				1			1			1	1				
Prorocentrum sp.															
Protoperidinioid sp.	5	2	3	3	3		2	1	1	4	5		2		
Pyrocystis lunula															
Raphidophytes															
Heterosigma akashiwo															

Table 6: Other flagellates, microzooplankton, dominant species, percent constituent, and total biomass in Simoom Sound samples.

date	02-Jul			14-Jul			20-Jul			27-Jul			03-Aug			10-Aug			17-Aug			24-Aug			31-Aug			07-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																														
Cryptomonads																														
Dictyocha speculum		1															1	1	1	1		1	1		1	1	1			
Dinobryon balticum																														
Ebria tripartita																														
Euglenoid																			1						1			1		
Phaeocystis pouchetii								1																						
Radiolarian																														
unid. Nanoflagellates	6	3	3	4	5	5	7	3	2	5	4	3	5	3	4	5	4	3	5	5	3	5	3	2	5	3	2	3	4	3
Zooplankton																														
Appendicularian																													1	
Bipinnaria																														
Ciliate	8	7	3	5	8	4	6	4	2	5	8	6	6	8	4	7	5	1	7	9	3	4	5	1	5	3	1	8	6	1
Copepod																														
Fungus																														
Nauplius								1	1																				1	
Pluteus																														
Rotifer																							1							
Tintinnid	4						2	2					1						2	1					2			1		
Zoea																														
other								1		1				1																
Dominant Species/Group																														
name	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*diatoms*	*Skeletonema costatum*	*Skeletonema costatum*	*Alexandrium tamarense*	*Skeletonema costatum*	*Cerratium fusus*	*Skeletonema costatum*	*Cerratium fusus*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Cerratium fusus*	*Noctiluca scintillans*	*Chaetoceros spp.*	*Cerratium fusus*	*Chaetoceros spp.*	*Leptocylindrus minimus*	*Cerratium fusus*	*Pseudonitzschia sp.*
count (cells/mL)	7000	2400	~150	1600	1200	2000	900	3400	450	10	5200	19	1150	200	2200	600	3800	~100	900	6000	~200	~50	26	2	1200	40	~30	2900	80	320
% constituent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	97	100	100	100	100	100	100	100	100	100
Diatoms	85	80	75	68	50	83	40	48	75	30	85	20	55	30	55	45	75	90	70	55	85	85	45	44	85	60	90	75	50	67
Dinoflagellates	5	9	8	15	28	2	25	30	10	30	9	60	20	40	20	35	15	5	20	35	2	5	45	45	5	35	8	10	40	30
Raphidophytes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Flagellates	3	1	2	5	2	5	10	2	5	20	1	2	5	5	5	3	3	3	5	2	2	3	1	1	2	1	1	2	1	1
Zooplankton	7	10	15	12	20	10	25	20	10	20	5	18	20	25	20	17	7	2	5	8	8	7	9	10	8	4	1	13	9	2
Biomass	3.5	3.0	2.0	3.0	3.0	2.5	2.5	3.5	2.5	2.5	4.0	2.5	3.0	4.0	3.0	2.5	4.0	1.5	3.0	4.0	2.0	2.0	3.0	2.0	4.0	3.5	2.0	4.0	4.0	2.5

Table 6 cont'd

date	14-Sep			21-Sep			28-Sep			05-Oct			12-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates															
Cryptomonads															
Dictyocha speculum						1	1	1							
Dinobryon balticum															
Ebria tripartita										1					
Euglenoid													1	1	
Phaeocystis pouchetii					1										
Radiolarian															
unid. Nanoflagellates	5	4	3	3	4	4	4	3	3	3	4	3	5	5	4
Zooplankton															
Appendicularian															
Ciliate	7	6	2	5	7	4	8	3	4	10	7	5	8	4	1
Copepod															
Nauplius															
Pluteus															
Rotifer					1										
Tintinnid			1							1			1		
Zoea															
other															
Dominant Species/Group															
name	*Leptocylindrus minimus*	*Skeletonema costatum*	*Skeletonema costatum*	*Thalassiosira nordenskioeld*	*Skeletonema costatum*	*Skeletonema costatum*	*Leptocylindrus minimus*	*Leptocylindrus minimus*	*Pseudonitzschia sp.*	*Leptocylindrus minimus*	*Skeletonema costatum*	*Skeletonema costatum*	*Rhizosolenia hebetata*	*Rhizosolenia hebetata*	*Skeletonema costatum*
count (cells/mL)	13200	15000	1100	110	5400	~100	2100	160	~100	1700	300	~200	~10	~10	~200
% constituent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Diatoms	80	90	90	60	75	45	70	65	80	55	55	55	40	60	75
Dinoflagellates	10	5	5	30	15	35	15	25	10	25	25	25	30	20	20
Raphidophytes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Flagellates	1	1	1	1	1	2	2	2	2	1	1	1	2	2	2
Zooplankton	9	4	4	9	9	18	13	8	8	19	19	19	28	18	3
Biomass	4.0	4.5	3.0	3.0	4.0	1.5	3.5	2.0	2.0	4.0	3.5	3.0	3.0	3.0	2.0

Table 7 : Diatoms in Viner Sound samples.

date	02-Jul			14-Jul			20-Jul			27-Jul			03-Aug			10-Aug			17-Aug			24-Aug			31-Aug			07-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																														
Achnanthes sp.																														
Amphiproral Tropidoneis																														
Asterionella japonica																														
Bacteriastrum sp.																														
Biddulphia sp.																														
Campylosira/Plagiogramma																														
Cerautalina sp.	1	1												1					1	1										
Chaetoceros concavicorne																														
Chaetoceros convolutus				1	1				1		1	1		1		1	1		1	1			1							
Chaetoceros sp.	3	2	1	7	6	5	7	6	5	6	9	9	6	7	8	8	10	3	6	8	4	5	6	3	8	6	2	5	6	5
Corethron hystrix																														
Coscinodiscus sp.																	1				1				1					
Dactyliisolen sp.																														
Ditylum brightwellii																														
Eucampia zoodiacus								1											1											
Grammatophora sp.																														
Hemialus sp.																														
Laudenia annulata																														
Leptocylindrus danicus				1	1		1				1						1		1	1								1	1	1
Leptocylindrus minimus																												1		
Licmophora sp.																														
Melosira sp.																	1													
Navicula sp.	1						1	1					1	1		1	1		1	1	2	1			1	1		1	1	1
Nitzschioid sp.		1		2	1	2	1	1		1	2	1	1	1	2	1	1	1		1		1	2		1	1		1	1	1
Pleurosigma/ Gyrosigma sp.																														
Rhizosolenia setigera																														
Rhizosolenia sp.	1	1																1				1	1		1	1				
Rhizosolenia stolterfothii																														
Skeletonema costatum	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Stephanopyxis sp.																														
Thalassionema sp.	1	1	1		1		1	1	1			1			1	1	1		1	1		1		1				1		
Thalassiosira sp.	1	1	1	2	2	1	1	1	1	1	2	1		1	1	2	1		1	1		1	1	1	3	1	1	3	2	2

Table 7 cont'd

date	14-Sep			21-Sep			28-Sep			05-Oct			12-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms															
Achnanthes sp.															
Amphiproral Tropidoneis															
Asterionella japonica															
Bacteriastrum sp.															
Biddulphia sp.														1	
Campylosira/Plagiogramma															
Cerautalina sp.															
Chaetoceros concavicorne															
Chaetoceros convolutus															
Chaetoceros sp.	3	3		2	3	5	4	3	3	3	6	3	2	2	1
Corethron hystrix															
Coscinodiscus sp.					1									1	
Dactylisolen sp.							1								
Ditylum brightwellii	1	1			1		1				1				
Eucampia zoodiacus													1		
Grammatophora sp.															
Hemialus sp.															
Lauderia annulata															
Leptocylindrus danicus					1					1	1		1	1	1
Leptocylindrus minimus	1					1		1	1	1	1			1	
Licmophora sp.															
Melosira sp.															
Navicula sp.					1		1	1		1	1				
Nitzschioid sp.	1	2	1	1	1	1	1	1	1	1	2	1	1	1	1
Pleurosigma/ Gyrosigma sp.															
Rhizosolenia setigera												1			
Rhizosolenia sp.		1			1								1	1	1
Rhizosolenia stolterfothii															
Skeletonema costatum	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Stephanopyxis sp.															
Thalassionema sp.	1					1	1			1					
Thalassiosira sp.	2	2	2	1	3	2	3	2	2	4	3	2	2	1	2

Table 8 : Dinoflagellates in Viner Sound samples.

date	02-Jul			14-Jul			20-Jul			27-Jul			03-Aug			10-Aug			17-Aug			24-Aug			31-Aug			07-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																														
Alexandrium sp.							1						1																	
Amphidinium sp.																														
Ceratium divericatum																														
Ceratium furca																														
Ceratium fusus																														
Ceratium lineatum																														
Ceratium pentagonum																														
Ceratium sp.								1																						
Cochlodinium sp.																														
Cochlodinium sp. 99																														
Dinophysioid sp.	1			1							1		1			1						1						1	1	
Gonyaulacoid sp.														1											1					
Gymnodinioid sp.	7	1	1	3	2		1	2	1	4	1	1	1	3	3	1	3	1	6	2	1	4	2	1	5	1	1	3	5	4
Gymnodinium galatheanum																														
Gyrodinium spirale-type				1	1	1	1								2		1	1		1		1	1						1	
Heterocapsa triquetra	1					1				1															1			1	1	1
Noctiluca scintillans																														
Noctilucoid sp.																						1								
Oxyrrhis marina				1		1	1						1																	
Oxytoxum sp.																														
Polykrikos sp.						1																								
Prorocentrum gracile													1															1		
Prorocentrum micans																														
Prorocentrum minimum																														
Prorocentrum sp.																														
Protoperidinioid sp.	10	1		3	1	1	4	1	1	1	1		3	1	1	3	1		5	3		3			8			8	3	
Pyrocystis lunula																														
Raphidophytes																														
Heterosigma akashiwo								1																						

Table 8 cont'd

date	14-Sep			21-Sep			28-Sep			05-Oct			12-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates															
Alexandrium sp.										1					
Amphidinium sp.															
Ceratium divericatum															
Ceratium furca															
Ceratium fusus							1							1	1
Ceratium lineatum															
Ceratium pentagonum															
Ceratium sp.															
Cochlodinium sp.										1					
Cochlodinium sp. 99															
Dinophysioid sp.	2	2	1	1	2					1					
Gonyaulacoid sp.															
Gymnodinioid sp.	4	5	3	6	3	4	2	3	1	5	2	2	5	6	4
Gymnodinium galatheanum															
Gyrodinium spirale-type					1	4	1			1	2	1		1	1
Heterocapsa triquetra	1	1	1	1											
Noctiluca scintillans															
Noctilucoid sp.															
Oxyrrhis marina															
Oxytoxum sp.															
Polykrikos sp.															
Prorocentrum gracile	1		1	1						1	1		1		
Prorocentrum micans															
Prorocentrum minimum	1									1			1		
Prorocentrum sp.															
Protoperidinioid sp.	5	1	4	4			1	3	2	4	2			2	1
Pyrocystis lunula															
Raphidophytes															
Heterosigma akashiwo		1													

Table 9 : Other flagellates, microzooplankton, dominant species, percent constituent, and total biomass in Viner Sound samples.

date	02-Jul			14-Jul			20-Jul			27-Jul			03-Aug			10-Aug			17-Aug			24-Aug			31-Aug			07-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																														
Cryptomonads																														
Dictyocha speculum		1	1								1	1		1	1	1	1		1	1		1	1	1	1	1	1	1	1	1
Dinobryon balticum																														
Ebria tripartita							1																							
Euglenoid	1												1						1			1			1					
Phaeocystis pouchetii				1																										
Radiolarian																														
unid. Nanoflagellates	5	4	2	4	4	3	4	3	3	4	4	2	3	5	4	4	3	5	3	3	3	6	3	2	5	4	2	7	5	3
Zooplankton																														
Appendicularian										1																				
Ciliate	8	2	1	5	5		8	6	2	2	5	4	2	4	3	4	3	1	6	1	3	3	1	1	5	4	1	3	2	4
Copepod				1							1		1	1		1														
Nauplius								1																					1	
Pluteus																														
Rotifer	1			1						1			1															1	1	
Tintinnid	2	1				1	3			1		1	1	1			1		1	2					1		1	2	1	1
Zoea																														
other																														
Dominant Species/Group																														
name	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Chaetoceros spp.*	*Skeletonema costatum*	*Skeletonema costatum*	*Chaetoceros spp.*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*
count (cells/mL)	4400	200	~50	11000	6600	2200	2600	10000	1100	1300	8000	3900	3000	12000	5500	5000	13000	~300	6400	22000	~400	1800	1800	50	6400	~100	~50	7200	11000	3000
% constituent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Diatoms	77	90	91	88	88	88	55	78	88	87	90	95	75	95	89	90	97	93	84	97	94	75	90	90	85	90	88	87	94	88
Dinoflagellates	10	3	3	5	5	5	20	10	5	5	1	1	10	2	5	4	1	5	10	1	1	5	1	1	9	3	2	10	2	5
Raphidophytes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Flagellates	3	3	3	2	2	2	5	2	2	3	1	1	5	1	1	3	1	1	1	1	1	15	8	8	1	1	5	2	2	2
Zooplankton	10	4	3	5	5	5	20	10	5	5	8	3	10	2	5	3	1	1	5	1	4	5	1	1	5	6	5	1	2	5
Biomass	3.5	2.5	1.5	4.5	4.0	3.0	3.0	4.0	3.0	3.0	4.0	3.5	3.0	4.0	3.0	3.5	4.5	2.0	4.0	4.5	2.0	3.5	3.5	2.0	4.0	2.5	2.0	4.0	4.0	3.5

Table 9 cont'd

date	14-Sep			21-Sep			28-Sep			05-Oct			12-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates															
Cryptomonads															
Dictyocha speculum			1		1								1		
Dinobryon balticum															
Ebria tripartita															
Euglenoid	1			1											
Phaeocystis pouchetii															
Radiolarian															
unid. Nanoflagellates	4	4	3	7	6	4	4	3	2	2	4	2	4	3	4
Zooplankton															
Appendicularian															
Ciliate	7	3	3	4	3	3	3	3	1	4	3	2	7	4	5
Copepod															
Nauplius	2							1							
Pluteus															
Rotifer	1		1	1										1	
Tintinnid	4	1													1
Zoea															
other															1
Dominant Species/Group															
name	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	"b" nanoflagellate	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Thalassiosira nordenskioeld*	*Thalassiosira nordenskioeld*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Rhizosolenia hebetata*	*Rhizosolenia hebetata*	*Skeletonema costatum*
count (cells/mL)	9500	7200	3000	2000	28000	3000	1300	350	260	12500	5600	1100	~15	~8	~300
% constituent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Diatoms	80	90	80	25	95	80	90	90	93	90	85	90	50	70	55
Dinoflagellates	10	5	15	30	2	14	5	5	4	7	10	5	20	20	25
Raphidophytes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Flagellates	1	1	1	35	1	1	1	2	1	1	1	1	2	1	1
Zooplankton	9	4	4	10	2	5	4	3	2	2	4	4	28	9	19
Biomass	4.0	4.0	3.5	2.0	4.5	3.5	3.5	3.0	3.0	4.5	4.0	3.0	3.0	2.0	2.0

Table 10 : Diatoms in Warren Islands samples.

date	05-Jul			12-Jul			19-Jul			26-Jul			02-Aug			09-Aug			16-Aug			23-Aug			30-Aug			06-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																														
Achnanthes sp.																														
Amphiproral Tropidoneis																														
Asterionella japonica																														
Bacteriastrum sp.																					1						1	1		
Biddulphia sp.																														
Campylosira/Plagiogramma														1											1					
Cerautalina sp.									1																					
Chaetoceros concavicorne							1	1			1	1				1														
Chaetoceros convolutus			1	1	1			1			4	3	5		1	1	4	3	1		1	1	4	1	1	1		3	2	
Chaetoceros sp.							1	1	1	1	1	1	1		1			1				1	1		1	1		1	1	
Corethron hystrix	1			1		1															1									
Coscinodiscus sp.																														
Dactylisolen sp.																														
Ditylum brightwellii																														
Eucampia zoodiacus																														
Grammatophora sp.																														
Hemialus sp.																														
Lauderia annulata																	1	1		1			1		1					
Leptocylindrus danicus																						1								
Leptocylindrus minimus						1			1																					
Licmophora sp.				1																								1	1	
Melosira sp.																										1				
Navicula sp.			1																											
Nitzschioid sp.		1						1				1					1													
Pleurosigma/ Gyrosigma sp.											1												1	1	1	1				
Rhizosolenia setigera																								1						
Rhizosolenia sp.																														
Rhizosolenia stolterfothii																														
Skeletonema costatum		1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Stephanopyxis sp.																														
Thalassionema sp.			1	1				1				1				1	1	1			1		1						1	
Thalassiosira sp.		1	1		1	1				2	1	2	2	1	1	1	2	2					2	1	1		1		1	

Table 10 cont'd

date	13-Sep			20-Sep			27-Sep			04-Oct			11-Oct			18-Oct			25-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																					
Achnanthes sp.																					
Amphiproral Tropidoneis																					
Asterionella japonica																					
Bacteriastrum sp.												1									
Biddulphia sp.																					
Campylosira/Plagiogramma																					
Cerautalina sp.																					
Chaetoceros concavicorne																					
Chaetoceros convolutus		1			1	1		1		1	1		1	1		1				1	
Chaetoceros sp.	1	4	3	3	3	1		2	2			1		1	1						
Corethron hystrix		1	1																		
Coscinodiscus sp.					1																
Dactylisolen sp.																					
Ditylum brightwellii																					
Eucampia zoodiacus																					
Grammatophora sp.																					
Hemialus sp.																					
Lauderia annulata																					
Leptocylindrus danicus				1	1										1						
Leptocylindrus minimus																					
Licmophora sp.																1					
Melosira sp.				1																	
Navicula sp.																	1				
Nitzschioid sp.		1		1	1	1	1		1												
Pleurosigma/ Gyrosigma sp.																					
Rhizosolenia setigera			1																		
Rhizosolenia sp.																					
Rhizosolenia stolterfothii																					
Skeletonema costatum	1	1	1	1	1	1	1	1	1		1	1	1		1	1	1	1	1		1
Stephanopyxis sp.																					
Thalassionema sp.								1											1		
Thalassiosira sp.		2	1	4	3	2	3	3	2			1			2						

Table 11 : Dinoflagellates in Warren Islands samples.

date	05-Jul			12-Jul			19-Jul			26-Jul			02-Aug			09-Aug			16-Aug			23-Aug			30-Aug			06-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																														
Alexandrium sp.																														
Amphidinium sp.																	1													
Ceratium divericatum																														
Ceratium furca																														
Ceratium fusus																														
Ceratium lineatum																														
Ceratium pentagonum																														
Ceratium sp.																														
Cochlodinium sp.																														
Cochlodinium sp. 99																														
Dinophysioid sp.																														
Gonyaulacoid sp.																														
Gymnodinioid sp.	1	2	2	1	1	2	1	3		1	1	1	2	2	1	3	2		2	1		1	2	2				1		2
Gymnodinium galatheanum																														
Gyrodinium spirale-type	1		1	1		1	1						1	1																
Heterocapsa triquetra		1	1	1	1	1			1							1		1												
Noctiluca scintillans																														
Noctilucoid sp.																														
Oxyrrhis marina																														
Oxytoxum sp.																														
Polykrikos sp.																														
Prorocentrum gracile																														
Prorocentrum micans																														
Prorocentrum minimum																														
Prorocentrum sp.																														
Protoperidinioid sp.		2	1		1	2					1		4	3		6	3	1		1		1					1			
Pyrocystis lunula																														
Raphidophytes																														
Heterosigma akashiwo	1	1																												

Table 11 cont'd

date	13-Sep			20-Sep			27-Sep			04-Oct			11-Oct			18-Oct			25-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																					
Alexandrium sp.																					
Amphidinium sp.																					
Ceratium divericatum																					
Ceratium furca																					
Ceratium fusus			1																		
Ceratium lineatum																					
Ceratium pentagonum																					
Ceratium sp.																					
Cochlodinium sp.																					
Cochlodinium sp. 99																					
Dinophysioid sp.																					
Gonyaulacoid sp.																					
Gymnodinioid sp.	3	3	2	4	3	1	4	2	1	1	1	2	1	2		2	2	1		2	1
Gymnodinium galatheanum																					
Gyrodinium spirale-type	1						1	2													1
Heterocapsa triquetra																					
Noctiluca scintillans																					
Noctilucoid sp.																					
Oxyrrhis marina																					
Oxytoxum sp.																					
Polykrikos sp.																					
Prorocentrum gracile																					
Prorocentrum micans																					
Prorocentrum minimum																					
Prorocentrum sp.																					
Protoperidinioid sp.	3			1		1	1			1											
Pyrocystis lunula																					
Raphidophytes																					
Heterosigma akashiwo																					

Table 12 : Other flagellates, microzooplankton, dominant species, percent constituent, and total biomass in Warren Islands samples.

date	05-Jul			12-Jul			19-Jul			26-Jul			02-Aug			09-Aug			16-Aug			23-Aug			30-Aug			06-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																														
Cryptomonads	1	1	1																											
Dictyocha speculum			1	1	1	1		1				1				1						1	1			1		1	1	
Dinobryon balticum																														
Ebria tripartita																														
Euglenoid													2	1	1	1	1	1												
Phaeocystis pouchetii																														
Radiolarian																						1								
unid. Nanoflagellates	6	5	5	3	2	3	4	4	3	5	6	5	5	5	7	5	3	3	5	3	2	3	5	3	3	3	4	4	4	4
Zooplankton																														
Appendicularian																														
Ciliate	4	3	4	2	2	1	2	4	1	4	1	7	5	6	1	6	7	2	6	5		7	6	3	4	4	2	4	2	3
Copepod									1																					
Nauplius																														
Pluteus																														
Rotifer																														
Tintinnid										1			1					1				1							1	
Zoea																														
other																														
Dominant Species/Group																														
name	nanoflagellates	nanoflagellates	*Skeletonema costatum*	*Dictyocha speculum*	*Dictyocha speculum*	*Dictyocha speculum*	*Corethron hystrix*	*Corethron hystrix*	*Corethron hystrix*	*Corethron hystrix*	*Corethron hystrix*	*Corethron hystrix*	*Skeletonema costatum*	diatoms	diatoms	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*
count (cells/mL)	4000	~2000	1800	13	17	~25	~50	~50	~85	22	80	115	1800	~150	~25	1000	1000	~200	~200	~400	~100	2800	3200	200	700	550	900	550	360	~100
% constituent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Diatoms	5	35	80	30	45	35	85	80	85	94	96	91	75	50	55	45	70	75	45	55	95	85	85	80	88	90	87	80	90	70
Dinoflagellates	5	5	5	20	10	20	5	5	5	1	1	1	10	15	5	20	10	5	20	10	0	1	1	1	0	0	1	1	0	10
Raphidophytes	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Flagellates	65	38	10	35	40	40	5	5	5	3	2	3	5	15	35	25	10	10	5	5	5	1	1	1	2	5	2	10	5	10
Zooplankton	20	20	5	15	5	5	5	10	5	2	1	5	10	20	5	10	10	10	30	30	0	13	13	18	10	5	10	9	5	10
Biomass				1.5	1.5	1.5	2.0	2.0	2.0	2.0	3.0	3.5	3.0	2.0	1.5	3.0	2.5	2.0	2.5	3.0	2.0	3.5	3.5	2.0	2.5	2.5	2.5	2.5	2.0	1.5

Table 12 cont'd

date	13-Sep			20-Sep			27-Sep			04-Oct			11-Oct			18-Oct			25-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																					
Cryptomonads																					
Dictyocha speculum			1																		
Dinobryon balticum																					
Ebria tripartita																					
Euglenoid																					
Phaeocystis pouchetii																					
Radiolarian																					
unid. Nanoflagellates	5	2	3	4	3	4	4	3	4	4	4	2	3	4	4	3	3	4	3	3	3
Zooplankton																					
Appendicularian																					
Ciliate	4	2	1	5	4	1	7	5	1	5	4	1	7	1	1	1	3	3	5	5	5
Copepod																					
Nauplius						1															
Pluteus																					
Rotifer																				1	
Tintinnid					1		1				1		1								
Zoea																					
other																					
Dominant Species/Group																					
name	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Chaetoceros convolutus*	*Chaetoceros convolutus*	*Skeletonema costatum*	*Chaetoceros convolutus*	*Chaetoceros convolutus*	"n" flagellate	*Skeletonema costatum*	*Skeletonema costatum*	ciliates	ciliates	ciliates	ciliates
count (cells/mL)	~20	~200	190	6600	5200	1000	1100	1900	800	~31	~12	1300	12	16	~200	~200	~50	~5	~20	~20	~20
% constituent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Diatoms	30	60	65	75	80	80	50	80	92	75	65	90	50	70	40	70	40	25	25	5	10
Dinoflagellates	25	15	15	10	5	5	20	10	3	1	5	5	1	10	0	10	20	15	0	10	15
Raphidophytes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Flagellates	20	10	10	5	2	5	1	1	2	9	5	2	15	15	50	10	5	20	15	15	10
Zooplankton	25	15	10	10	13	10	29	9	3	15	25	3	34	5	10	10	35	40	60	70	65
Biomass	2.0	2.0	2.0	4.0	3.5	2.5	2.5	3.5	3.0	2.0	2.0	2.0	2.0	2.0	1.0	2.0	1.5	1.0	1.5	1.5	1.5

Table 13 : Diatoms in Boughy Bay samples.

date	5-Jul			12-Jul			19-Jul			26-Jul			2-Aug			9-Aug			16-Aug			23-Aug			30-Aug			6-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																														
Achnanthes sp.																														
Amphiproral Tropidoneis																														
Asterionella japonica																														
Bacteriastrum sp.																														
Biddulphia sp.								1												1	1		1			1				
Campylosira/Plagiogramma				1																			1							
Cerautalina sp.													1																	
Chaetoceros concavicorne							1	1			1																			
Chaetoceros convolutus				1						1	1	1	1	1	1		1	1			1									
Chaetoceros sp.	3	2	1	4	3	2	4	4	2	6	6	6	6	7	6	6	3	4	2	5	5	6	5	5	5	4	3	3	3	
Corethron hystrix	1			1	1		1	1	1	1	1	1	1	1	1		1		1	1							1	1	1	
Coscinodiscus sp.																				1							1			
Dactylisolen sp.																														
Ditylum brightwellii																														
Eucampia zoodiacus																														
Grammatophora sp.																														
Hemialus sp.																														
Lauderia annulata	1		1						1																					
Leptocylindrus danicus					1						1		1			1	1		1	1	1			1		1				
Leptocylindrus minimus																1								1	1	1				
Licmophora sp.																														
Melosira sp.																1	1	1					1							
Navicula sp.		1								1		1						1								1			1	
Nitzschioid sp.	1	1	2	1	1			2			1		1	2	1	1		2		1				1	1	1	1	2		
Pleurosigma/ Gyrosigma sp.											1				1		1													
Rhizosolenia setigera														1								1	1	1	1	1	1	1	1	1
Rhizosolenia sp.														1	1															
Rhizosolenia stolterfothii																														
Skeletonema costatum	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Stephanopyxis sp.											1																			
Thalassionema sp.	1	1	1	1		1						1				1		1												1
Thalassiosira sp.	1	1	1	2	1	1	1	2	1	3	2	2	2	2	3	3	3	2		1		2	2	1	1	1		2	1	

Table 13 cont'd

date	13-Sep			20-Sep			27-Sep			4-Oct			11-Oct			18-Oct			25-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																					
Achnanthes sp.																					
Amphiprora/ Tropidoneis																					
Asterionella japonica																					
Bacteriastrum sp.																					
Biddulphia sp.													1								
Campylosira/Plagiogramma																					
Cerautalina sp.														1							
Chaetoceros concavicorne																					
Chaetoceros convolutus										1							1		1		1
Chaetoceros sp.	3	4	2	4	2	2	2	1	1	3	3	2	2	3			1				
Corethron hystrix		1																			
Coscinodiscus sp.									1												
Dactylisolen sp.																					
Ditylum brightwellii																					
Eucampia zoodiacus																					
Grammatophora sp.																					
Hemialus sp.														1							
Lauderia annulata																					
Leptocylindrus danicus						1				1											
Leptocylindrus minimus						1															
Licmophora sp.																					
Melosira sp.																					
Navicula sp.							1			1											
Nitzschioid sp.		2	1	1	1	1	1	3	1	1											1
Pleurosigma/ Gyrosigma sp.																				1	
Rhizosolenia setigera		1	1																		
Rhizosolenia sp.																					
Rhizosolenia stolterfothii																					
Skeletonema costatum	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Stephanopyxis sp.																					
Thalassionema sp.			1							1				1							
Thalassiosira sp.	2	3		3	3	3	2	2	2	1	1	2	1		1		1				

Table 14 : Dinoflagellates in Boughy Bay samples.

date	5-Jul			12-Jul			19-Jul			26-Jul			2-Aug			9-Aug			16-Aug			23-Aug			30-Aug			6-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																														
Alexandrium sp.																														
Amphidinium sp.																						1								
Ceratium divericatum																														
Ceratium furca																														
Ceratium fusus																														
Ceratium lineatum																														
Ceratium pentagonum																														
Ceratium sp.																														
Cochlodinium sp.					1																									
Dinophysioid sp.																														
Gonyaulacoid sp.	2									1				1						1										
Gymnodinioid sp.	2		2	2	2	2		2		2	2		4	3	5	4	3	3	3	3	3	5	5	3	2	4	3	3	4	2
Gymnodinium galatheanum																														
Gyrodinium spirale-type	1	1	1	2	2	2		1		1			3	3	1		2					2	1		1				1	
Heterocapsa triquetra	1	1		1	1	1	1	1	1					1	1	1		1												
Noctiluca scintillans																														
Noctilucoid sp.																														
Oxyrrhis marina													1																	
Oxytoxum sp.																														
Polykrikos sp.																														
Prorocentrum gracile																			1											
Prorocentrum micans																														
Prorocentrum minimum																														
Prorocentrum sp.																														
Protoperidinioid sp.	5	3	2	8	7	2	1	2		2	1	1	5	4	1	4	2			3	1	1		1			1		3	
Pyrocystis lunula																														
Raphidophytes																														
Heterosigma akashiwo																														

Table 14 cont'd

date	13-Sep			20-Sep			27-Sep			4-Oct			11-Oct			18-Oct			25-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																					
Alexandrium sp.																					
Amphidinium sp.																					
Ceratium divericatum																					
Ceratium furca																					
Ceratium fusus							1	1													
Ceratium lineatum																					
Ceratium pentagonum																					
Ceratium sp.																					
Cochlodinium sp.																					
Dinophysioid sp.																					
Gonyaulacoid sp.																					
Gymnodinioid sp.	1			3	1	3	2	2	1	5	4	1	2	1	2			1	3	3	1
Gymnodinium galatheanum																					
Gyrodinium spirale-type					2	1	1			1	1	1									
Heterocapsa triquetra										1	1										
Noctiluca scintillans																					
Noctilucoid sp.																					
Oxyrrhis marina																					
Oxytoxum sp.																					
Polykrikos sp.																					
Prorocentrum gracile																					
Prorocentrum micans																					
Prorocentrum minimum																					
Prorocentrum sp.																					
Protoperidinioid sp.	1	1	2	2							2		1				1				
Pyrocystis lunula																					
Raphidophytes																					
Heterosigma akashiwo																					

Table 15 : Other flagellates, microzooplankton, dominant species, percent constituent, and total biomass in Boughy Bay samples.

date	5-Jul			12-Jul			19-Jul			26-Jul			2-Aug			9-Aug			16-Aug			23-Aug			30-Aug			6-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																														
Cryptomonads			1																											
Dictyocha speculum	1	1		1	1	1	1			1	1	1			1	1	1		1	1				1	1	1	1	1	1	1
Dinobryon balticum																														
Ebria tripartita	1	1	1																											
Euglenoid													2	2		1	1	1												
Phaeocystis pouchetii																														
Radiolarian																						1	1							
unid. Nanoflagellates	4	2	3	4	3	3	4	4	2	3	5	3	4	5	6	4	3	3	2	3	2	4	3	4	4	4	2	2	4	3
Zooplankton																														
Appendicularian				1																										
Ciliate	4	4	4	4	7	1	6	5	4	8	4	6	4	8	7	6	7	6	4	6	4	5	10	6	8	4	7	6	4	3
Copepod																														
Nauplius												1					1					1								
Pluteus																														
Rotifer										1	1																			
Tintinnid	2	1		1			1		1	1	1	1	1	2	1	1	2		2	2		1			1			1		2
Zoea																														
other			1																											
Dominant Species/Group																														
name	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Chaetoceros spp.*	*Chaetoceros spp.*	*Corethron hystrix*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*
count (cells/mL)	4000	1700	2500	6000	8600	2000	1200	250	~100	8000	5500	120	3400	10500	1600	3800	10000	3500	4300	11800	4000	20000	6600	7000	3800	3700	600	5700	1300	160
% constituent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Diatoms	88	91	89	80	80	75	85	75	80	91	91	86	75	94	75	80	86	83	84	95	89	95	85	90	85	86	85	88	89	85
Dinoflagellates	5	3	3	10	10	15	5	10	8	2	2	2	10	2	10	8	2	5	10	2	5	1	3	1	2	4	4	1	5	4
Raphidophytes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Flagellates	2	3	3	5	5	8	3	5	2	2	2	2	5	1	5	5	2	2	1	1	1	1	1	1	2	2	1	1	1	4
Zooplankton	5	3	5	5	5	2	7	10	10	5	5	10	10	3	10	7	10	10	5	2	5	3	11	8	11	8	10	10	5	7
Biomass				3.5	4.0	3.0	3.0	2.5	2.0	4.5	4.5	3.5	3.5	4.0	3.5	3.5	4.0	3.0	3.5	4.0	3.5	4.5	4.0	3.5	3.5	3.0	2.5	3.5	2.5	2.0

Table 15 cont'd

date	13-Sep			20-Sep			27-Sep			4-Oct			11-Oct			18-Oct			25-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																					
Cryptomonads																					
Dictyocha speculum																					
Dinobryon balticum																					
Ebria tripartita																					
Euglenoid																					
Phaeocystis pouchetii																					
Radiolarian																					
unid. Nanoflagellates	3	4	2	3	3	4	2	2	3	4	4	3	4	3	5	3	4	3	3	4	2
Zooplankton																					
Appendicularian																					
Ciliate	4	4	3	6	1	4	1	3	3	6	8	2	4	2	3	5	4	3	4	5	3
Copepod																					
Nauplius																					
Pluteus																					
Rotifer																					
Tintinnid					1					1			1		1						
Zoea																					
other																					
Dominant Species/Group																					
name	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Chaetoceros spp.*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*
count (cells/mL)	1140	4200	500	6800	3000	1500	1200	1600	1800	1500	2000	1500	~30	~80	~40	30	~10	~10	880	720	500
% constituent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Diatoms	80	94	94	95	95	80	85	85	85	80	80	92	50	70	55	40	50	35	65	60	70
Dinoflagellates	5	1	2	1	1	5	10	10	5	10	10	3	10	5	10	0	5	10	15	15	5
Raphidophytes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Flagellates	1	1	2	1	1	2	1	1	1	1	1	1	10	5	5	20	15	20	5	5	5
Zooplankton	14	4	2	3	3	13	4	4	9	9	9	4	30	20	30	40	30	35	15	20	20
Biomass	3.0	3.5	2.5	4.0	3.0	3.0	3.5	3.5	3.5	3.0	3.5	3.0	1.5	1.5	1.5	1.0	1.5	1.0	2.0	2.0	2.0

Table 16 : Diatoms in Chancellor Channel samples.

date	8-Jul			15-Jul			22-Jul			29-Jul			5-Aug			12-Aug			19-Aug			2-Sep			9-Sep			16-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																														
Achnanthes sp.																														
Amphiprora/ Tropidoneis													1																	
Asterionella japonica																														
Bacteriastrum sp.																														
Biddulphia sp.																														
Campylosira/Plagiogramma				1		1																								
Cerautalina sp.												1																		
Chaetoceros concavicorne																														
Chaetoceros convolutus																														
Chaetoceros sp.		1		1	2	1	2	2		3	3	2	3	2	1		2							1	1			1	1	3
Corethron hystrix						1	1	1	1				1	1		1	1													
Coscinodiscus sp.			1																											
Dactylisolen sp.																														
Ditylum brightwellii																														
Eucampia zoodiacus																														
Grammatophora sp.																														
Hemialus sp.																														
Lauderia annulata			1				1		1																					
Leptocylindrus danicus				1	1	1			1																					
Leptocylindrus minimus																	1													
Licmophora sp.																														
Melosira sp.																		1												1
Navicula sp.					1																								1	
Nitzschioid sp.			1	1	2	1						1																	1	
Pleurosigma/ Gyrosigma sp.																								1						
Rhizosolenia setigera																	1		1					1						1
Rhizosolenia sp.								1																					1	
Rhizosolenia stolterfothii																														
Skeletonema costatum	1	1	1		1		1	1	1	1													1				1		1	1
Stephanopyxis sp.																														
Thalassionema sp.											1							1												
Thalassiosira sp.	1	1	1	2	2	1	1	1	1		2	2	1			1		1			1							1	1	2

Table 16 cont'd

date	23-Sep			30-Sep			7-Oct			14-Oct			21-Oct			28-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																		
Achnanthes sp.																		
Amphiproral Tropidoneis															1			
Asterionella japonica																		
Bacteriastrum sp.																		
Biddulphia sp.																		
Campylosira/Plagiogramma																		
Cerautalina sp.																		
Chaetoceros concavicorne																		
Chaetoceros convolutus											1							
Chaetoceros sp.	2	1	1	1			1											
Corethron hystrix																	1	
Coscinodiscus sp.												1						
Dactylisolen sp.																		
Ditylum brightwellii														1				1
Eucampia zoodiacus														1				
Grammatophora sp.																		
Hemialus sp.																		
Lauderia annulata																		
Leptocylindrus danicus					1													
Leptocylindrus minimus																		
Licmophora sp.																1		
Melosira sp.							1	1						1				
Navicula sp.							1				1							
Nitzschioid sp.			1				2		1	1			1				1	1
Pleurosigma/ Gyrosigma sp.																		
Rhizosolenia setigera		1																
Rhizosolenia sp.																		
Rhizosolenia stolterfothii																		
Skeletonema costatum	1	1	1	1		1			1			1						
Stephanopyxis sp.																		
Thalassionema sp.	1															1		
Thalassiosira sp.	1	2	1			1	1	1	1						1			

Table 17 : Dinoflagellates in Chancellor Channel samples.

date	8-Jul			15-Jul			22-Jul			29-Jul			5-Aug			12-Aug			19-Aug			2-Sep			9-Sep			16-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																														
Alexandrium sp.																						1								
Amphidinium sp.																														
Ceratium divericatum																														
Ceratium furca																														
Ceratium fusus																														
Ceratium lineatum																								1						
Ceratium pentagonum																														
Ceratium sp.																														
Cochlodinium sp.																														
Dinophysioid sp.																			2		1									
Gonyaulacoid sp.																1	1													
Gymnodinioid sp.	1			1	1	2	1		1	2	1	1	2	2	1	1	3	1	1				2	2	4	3	1	2	2	1
Gymnodinium galatheanum																														
Gyrodinium spirale-type				1			1							1									1							
Heterocapsa triquetra			1									1																		
Noctiluca scintillans																														
Noctilucoid sp.																														
Oxyrrhis marina																			1					1						
Oxytoxum sp.											1												1							
Polykrikos sp.																														
Prorocentrum gracile											1																	1		1
Prorocentrum micans																														
Prorocentrum sp.																														
Protoperidinioid sp.			3	3	2	2			2	1					1							1		1		1		2	1	1
Pyrocystis lunula																														
Raphidophytes																														
Heterosigma akashiwo			1	1	1											1	1													

Table 17 cont'd

date	23-Sep			30-Sep			7-Oct			14-Oct			21-Oct			28-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																		
Alexandrium sp.										1								
Amphidinium sp.																		
Ceratium divericatum																		
Ceratium furca																		
Ceratium fusus																		
Ceratium lineatum																		
Ceratium pentagonum																		
Ceratium sp.																		
Cochlodinium sp.																		
Dinophysioid sp.				1														
Gonyaulacoid sp.																		
Gymnodinioid sp.	3	1	1				1	2	1	2	1	2	1	3	2	1	1	3
Gymnodinium galatheanum																		
Gyrodinium spirale-type																		
Heterocapsa triquetra																		
Noctiluca scintillans																		
Noctilucoid sp.																		
Oxymhis marina																		
Oxytoxum sp.																		
Polykrikos sp.																		
Prorocentrum gracile																		
Prorocentrum micans	1																	
Prorocentrum sp.																		
Protoperidinioid sp.	1									1					1			
Pyrocystis lunula																		
Raphidophytes																		
Heterosigma akashiwo																		

Table 18 : Other flagellates, microzooplankton, dominant species, percent constituent, and total biomass in Chancellor Channel samples.

date	8-Jul			15-Jul			22-Jul			29-Jul			5-Aug			12-Aug			19-Aug			2-Sep			9-Sep			16-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																														
Cryptomonads			1	1																										
Dictyocha speculum				1			1																		1					
Dinobryon balticum																														
Ebria tripartita																														
Euglenoid				1			1			1		1		1										1						
Phaeocystis pouchetii																														
Radiolarian										1																				
unid. Nanoflagellates	3	2	2	3	4	4	3	1	3	3	7	5	3	4	4	3	3	3	2	2	2	2	3	3	3	3	3	4	3	5
Zooplankton																														
Appendicularian																														
Ciliate	1	2	1	6	1	2			2	4	1	1	1	2	2	4	3		1	2	1		1		1		3	2	2	3
Copepod																														
Nauplius				1												1			1											
Pluteus																														
Rotifer																														
Tintinnid	1			1			1			2																				
Zoea																														
other																														
Dominant Species/Group																														
name	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	diatoms	*Pseudontzschia sp.*	*Pseudontzschia sp.*	*Chaetoceros spp.*	*Thalassiosira spp.*	diatoms	*Chaetoceros debilis*	*Chaetoceros debilis*	*Chaetoceros debilis*	*Chaetoceros debilis*	*Chaetoceros debilis*	*Chaetoceros debilis*	*Thalassiosira sp.*	diatoms	diatoms	*Dinophysis spp.*	ciliates	*Thalassiosira sp.*	dinoflagellates	dinoflagellates	dinoflagellates	dinoflagellates	dinoflagellates	ciliates	*Chaetoceros debilis*	*Chaetoceros debilis*	*Chaetoceros debilis*
count (cells/mL)	250	350	~100	~100	40	25	~50	~10	~50	~80	~130	~40	210	90	160	~10	~5	~4	3	2	2	3	7	6	~5	~5	~5	30	~100	~120
% constituent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Diatoms	84	90	88	35	75	75	70	95	75	58	73	70	90	87	90	50	50	60	10	0	40	0	10	35	5	0	20	30	50	50
Dinoflagellates	1	0	5	20	10	10	15	0	10	2	2	5	5	7	4	15	15	30	60	0	25	70	60	45	50	55	20	25	30	20
Raphidophytes	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Flagellates	10	5	5	15	5	5	5	5	5	15	15	20	1	1	1	5	5	10	10	30	10	30	20	20	40	45	25	25	10	10
Zooplankton	5	5	1	30	10	10	10	0	10	25	10	5	4	5	5	20	20	0	20	70	25	0	10	0	5	0	35	20	10	20
Biomass										2.0	2.5	2.0	2.5	2.0	2.0	1.5	1.5	1.5	1.5	1.0	1.5	1.5	1.5	1.5	1.0	1.0	1.0	1.5	2.0	2.5

Table 18 cont'd

date	23-Sep			30-Sep			7-Oct			14-Oct			21-Oct			28-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																		
Cryptomonads																		
Dictyocha speculum	1											1			1			
Dinobryon balticum																		
Ebria tripartita																		
Euglenoid																		
Phaeocystis pouchetii																		
Radiolarian																		
unid. Nanoflagellates	3	3	2	2	2	2	4	4	3	3	4	2	3	5	2	2	3	3
Zooplankton																		
Appendicularian																		
Ciliate	4	1	2				4	3	2	3	4	2	5	2	2	1	2	1
Copepod																		
Nauplius																		
Pluteus																		
Rotifer																		
Tintinnid																		
Zoea																		
other																		
Dominant Species/Group																		
name	*Thalassiosira sp.*	*Skeletonema costatum*	*Skeletonema costatum*	diatoms	diatoms	diatoms	diatoms	ciliates	*Thalassiosira sp.*	dinoflagellates	ciliates	ciliates	ciliates	diatoms	diatoms	diatoms	diatoms	diatoms
count (cells/mL)	7	20	50	~20	~4	~4	~200	~5	~5	~10	~6	~4	~20	~4	~3	~2	~2	~2
% constituent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Diatoms	50	75	85	45	60	60	75	25	40	5	40	30	10	25	35	45	35	35
Dinoflagellates	20	5	5	30	0	0	5	30	20	45	5	25	10	25	25	10	15	25
Raphidophytes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Flagellates	10	10	5	25	40	40	2	10	10	15	10	10	20	25	15	35	25	20
Zooplankton	20	10	5	0	0	0	18	35	30	35	45	35	60	25	25	10	25	20
Biomass	1.5	1.5	1.5	1.0	1.0	1.0	3.0	1.0	1.5	1.5	1.5	1.0	1.5	1.0	1.0	1.0	1.0	1.0

Table 19 : Diatoms in Homfray Creek samples.

date	08-Jul			15-Jul			22-Jul			29-Jul			05-Aug			12-Aug			26-Aug			02-Sep			09-Sep			16-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																														
Achnanthes sp.																														
Amphiprora/ Tropidoneis																														
Asterionella japonica																														
Bacteriastrum sp.																														
Biddulphia sp.																														
Campylosira/Plagiogramma																														
Cerautalina sp.													1													1		1		
Chaetoceros concavicorne																														
Chaetoceros convolutus						1									1															
Chaetoceros sp.									1																2			3	1	
Corethron hystrix																														
Coscinodiscus sp.																														
Dactylisolen sp.																														
Ditylum brightwellii																														
Eucampia zoodiacus																												1	1	
Grammatophora sp.																														
Hemialus sp.																														
Lauderia annulata																														
Leptocylindrus danicus				1																			1	1				1		
Leptocylindrus minimus							1																							
Licmophora sp.																														
Melosira sp.									1				1																	
Navicula sp.																			1							1				
Nitzschioid sp.		1		1					1				1						1									1	1	
Pleurosigma/ Gyrosigma sp.																														
Rhizosolenia setigera																									1	1	1	1	1	1
Rhizosolenia sp.																												1		1
Rhizosolenia stolterfothii																														
Skeletonema costatum				1	1	1	1	1		1	1					1		1		1	1						1			
Stephanopyxis sp.																														
Thalassionema sp.											1		1															1	1	
Thalassiosira sp.	1																							1	1	1		1	1	1

Table 19 cont'd

date	07-Oct			14-Oct			21-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms									
Achnanthes sp.									
Amphiprora/ Tropidoneis									
Asterionella japonica		1							
Bacteriastrum sp.									
Biddulphia sp.									
Campylosira/Plagiogramma									
Cerautalina sp.			1						
Chaetoceros concavicorne									
Chaetoceros convolutus			1						
Chaetoceros sp.	6	2	2		1				
Corethron hystrix		1	1			1			
Coscinodiscus sp.	1	1	1						
Dactylisolen sp.									
Ditylum brightwellii	1	1	1			1			
Eucampia zoodiacus	1		1						
Grammatophora sp.	1								
Hemialus sp.									
Lauderia annulata									
Leptocylindrus danicus	1	1	1						
Leptocylindrus minimus									1
Licmophora sp.									
Melosira sp.									1
Navicula sp.									1
Nitzschioid sp.							1		
Pleurosigma/ Gyrosigma sp.	1								
Rhizosolenia setigera	1		1						
Rhizosolenia sp.									
Rhizosolenia stolterfothii									
Skeletonema costatum	1					1			
Stephanopyxis sp.									
Thalassionema sp.		1	1						
Thalassiosira sp.	1	1	1						

Table 20 : Dinoflagellates in Homfray Creek samples.

date	08-Jul			15-Jul			22-Jul			29-Jul			05-Aug			12-Aug			26-Aug			02-Sep			09-Sep			16-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																														
Alexandrium sp.																										1				
Amphidinium sp.																														
Ceratium divericatum																														
Ceratium furca																														
Ceratium fusus											1			1			1		1	1	1	1	1	1	1	1	1	1	1	1
Ceratium lineatum																														
Ceratium pentagonum																														
Ceratium sp.																														
Cochlodinium sp.																														
Dinophysioid sp.			1		1			1			2	2			1			1	2	2	1		2		1	3				
Gonyaulacoid sp.							3	1		1	1	1		1			1		1	1	1	1	1		1	2	1	1		
Gymnodinioid sp.		3	2		4	3	4	3	6	1	2	1	1	2		1	2	1	1	6		8	7	4	4	6		1	2	2
Gymnodinium galatheanum																														
Gyrodinium spirale-type																					1		1		1	2			2	
Heterocapsa triquetra					1																									
Noctiluca scintillans											1																			
Noctilucoid sp.																														
Oxyrrhis marina																						1								
Oxytoxum sp.											1								1		1	1				1				
Polykrikos sp.																														
Prorocentrum gracile																						1								
Prorocentrum micans																														
Prorocentrum minimum																			1	1										
Prorocentrum sp.																														
Protoperidinioid sp.	1		1	2	3		2	3	3		1	1		1	1	1			2	1	1	1		1	2	5	2	4	2	
Pyrocystis lunula																									1					
Raphidophytes																														
Heterosigma akashiwo								1	1																					

Table 20 cont'd

date	07-Oct			14-Oct			21-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates									
Alexandrium sp.									
Amphidinium sp.									
Ceratium divericatum									
Ceratium furca									
Ceratium fusus	1	1	1						
Ceratium lineatum									
Ceratium pentagonum									
Ceratium sp.									
Cochlodinium sp.									
Dinophysioid sp.									
Gonyaulacoid sp.			1						
Gymnodinioid sp.	2	5	4		2		2		1
Gymnodinium galatheanum									
Gyrodinium spirale-type			1						
Heterocapsa triquetra									
Noctiluca scintillans									
Noctilucoid sp.									
Oxyrrhis marina									
Oxytoxum sp.									
Polykrikos sp.									
Prorocentrum gracile									
Prorocentrum micans									
Prorocentrum minimum									
Prorocentrum sp.									
Protoperidinioid sp.	3		1						1
Pyrocystis lunula									
Raphidophytes									
Heterosigma akashiwo									

Table 21 : Other flagellates, microzooplankton, dominant species, percent constituent, and total biomass in Homfray Creek samples.

date	08-Jul			15-Jul			22-Jul			29-Jul			05-Aug			12-Aug			26-Aug			02-Sep			09-Sep			16-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																														
Cryptomonads		1			1			1																						
Dictyocha speculum					1	1	1		1											1	1	1	1	1		1			1	
Dinobryon balticum																														
Ebria tripartita																														
Euglenoid								1	1		1																			
Phaeocystis pouchetii																														
Radiolarian																														
unid. Nanoflagellates	2	1	2	3	4	4	3	5	4	5	5	5	2	3	3	3	3	3	3	3	3	4	2	3	2	3	3	4	4	3
Zooplankton																														
Appendicularian																														
Ciliate	2	1	2	4	3	4	6	7	3		2	4				1			2	2	4	9	8	6	3	6	3	3	3	1
Copepod																								1						
Nauplius								1																						
Pluteus																														
Rotifer																														
Tintinnid					1																		2		1	1			1	
Zoea																														
other														1																
Dominant Species/Group																														
name	nothing dominant	*Gymnodinium sp.*	dinoflagellates	nothing dominant	*Heterocapsa triquetra*	nothing dominant	*Skeletonema costatum*	dinoflagellates	dinoflagellates	*Skeletonema costatum*	*Ceratium fusus*	large dinoflagellates	*Melosira sp.*	dinoflagellates	dinoflagellates	*Skeletonema costatum*	*Ceratium fusus*	*Skeletonema costatum*	dinoflagellates	*Ceratium fusus*	*Ceratium fusus*	*Dictyocha speculum*	*Dictyocha speculum*	*Dictyocha speculum*	*Ceratium fusus*	*Ceratium fusus*	*Ceratium fusus*	*Ceratium fusus*	*Rhizosolenia setigera*	*Ceratium fusus*
count (cells/mL)		2	5		20		~100	~20	~20	~100	3	7	70	~5	~4	~10	5	~10	~10	25	9	20	100	20	135	310	100	185	~30	~10
% constituent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Diatoms	20	5	0	30	5	25	50	10	5	70	20	1	98	0	20	45	0	45	10	1	0	0	5	5	45	25	25	40	45	40
Dinoflagellates	30	70	45	20	40	25	25	42	45	10	55	69	1	60	50	20	85	25	70	65	60	30	30	35	50	65	70	45	35	50
Raphidophytes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Flagellates	20	20	20	20	25	25	5	10	25	20	15	10	1	20	30	25	15	30	10	30	30	40	35	30	1	1	1	5	10	5
Zooplankton	30	5	35	30	30	25	20	38	25	0	10	20	0	20	0	10	0	0	10	4	10	30	30	30	4	9	4	10	10	5
Biomass										1.5	2.5	2.0	2.0	1.5	1.5	1.0	1.5	1.0	1.5	2.5	2.0	2.5	3.0	2.5	3.0	3.5	3.0	3.5	2.0	2.0

Table 21 cont'd

date	07-Oct			14-Oct			21-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates									
Cryptomonads									
Dictyocha speculum			1						
Dinobryon balticum									
Ebria tripartita									
Euglenoid							1		
Phaeocystis pouchetii									
Radiolarian									
unid. Nanoflagellates	3	4	4	3	3	2	5		5
Zooplankton									
Appendicularian									
Ciliate	4	3	5	2	3	2	10		5
Copepod									
Nauplius			1				1		
Pluteus									
Rotifer	1								
Tintinnid			2						
Zoea									
other									
Dominant Species/Group									
name	*Ceratium fusus*	diatoms	*Coscinodiscus sp.*	ciliates	ciliates	*Corethron hystrix*	ciliates	no sample	ciliates
count (cells/mL)	35	~60	350	~10	~10	2	~100		~20
% constituent	100	100	100	100	100	100	100	100	100
Diatoms	60	45	65	0	5	60	5	15	30
Dinoflagellates	35	40	20	0	20	0	5	10	15
Raphidophytes	0	0	0	0	0	0	0	0	0
Other Flagellates	1	1	1	35	20	20	40	30	20
Zooplankton	4	14	14	65	55	20	50	45	35
Biomass	3.5	2.0	3.0	1.0	1.0	1.0	1.5	1.5	1.5

Table 22 : Diatoms in Glacial Creek samples.

date	01-Jul			08-Jul			15-Jul			22-Jul			29-Jul			05-Aug			12-Aug			19-Aug			26-Aug			02-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																														
Achnanthes sp.																														
Amphiproral Tropidoneis																														
Asterionella japonica																														
Bacteriastrum sp.																														
Biddulphia sp.																														
Campylosira/Plagiogramma																														
Cerautalina sp.																														
Chaetoceros concavicorne																														
Chaetoceros convolutus																														
Chaetoceros sp.		1	1	1		1		1	1																					
Corethron hystrix																							1							
Coscinodiscus sp.																														
Dactylisolen sp.				1	1	1																								
Ditylum brightwellii																														
Eucampia zoodiacus																														
Grammatophora sp.																									1					
Hemialus sp.																														
Lauderia annulata																														
Leptocylindrus danicus	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Leptocylindrus minimus																1	1													
Licmophora sp.																														
Melosira sp.																														
Navicula sp.				1																										
Nitzschioid sp.	1			1	1			1	1				1					1												
Pleurosigma/ Gyrosigma sp.														1																
Rhizosolenia setigera																										1	1			
Rhizosolenia sp.																														
Rhizosolenia stolterfothii																														
Skeletonema costatum	1	1		1	1	1		1	1			1															1			1
Stephanopyxis sp.																														
Thalassionema sp.																														
Thalassiosira sp.																								1						

Table 22 cont'd

date	16-Sep			23-Sep			30-Sep			07-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms												
Achnanthes sp.												
Amphiproral Tropidoneis												
Asterionella japonica												
Bacteriastrum sp.												
Biddulphia sp.												
Campylosira/Plagiogramma												
Cerautalina sp.			1									
Chaetoceros concavicorne												
Chaetoceros convolutus												
Chaetoceros sp.	3	1	1	2	3		4		1	2	2	2
Corethron hystrix						1						
Coscinodiscus sp.										1	1	1
Dactylisolen sp.												
Ditylum brightwellii										1	1	1
Eucampia zoodiacus			1		1					1		
Grammatophora sp.												
Hemialus sp.												
Lauderia annulata												
Leptocylindrus danicus												
Leptocylindrus minimus												1
Licmophora sp.					1	1						
Melosira sp.												
Navicula sp.												
Nitzschioid sp.			1		1	1			1		1	
Pleurosigma/ Gyrosigma sp.						1						
Rhizosolenia setigera	1											
Rhizosolenia sp.	1	1										
Rhizosolenia stolterfothii												
Skeletonema costatum	1	1	1	1						1	1	1
Stephanopyxis sp.												
Thalassionema sp.												
Thalassiosira sp.	3	1	1	2	3	3			1			1

Table 23 : Dinoflagellates in Glacial Creek samples.

date	01-Jul			08-Jul			15-Jul			22-Jul			29-Jul			05-Aug			12-Aug			19-Aug			26-Aug			02-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																														
Alexandrium sp.														1	1										1	1	1			
Amphidinium sp.																														
Ceratium divericatum																														
Ceratium furca																														
Ceratium fusus	1	1	1		1	1		1	1		1			1	1			1	1	1	1		1		1	1	1			1
Ceratium lineatum																														
Ceratium pentagonum																														
Ceratium sp.																														
Cochlodinium sp.																														
Dinophysioid sp.	1	2	1		1			2			1	1		1	1		1	1			1		1		1	2	3			1
Gonyaulacoid sp.	1					1				1	2							1												
Gymnodinioid sp.	3	2	2	4	3	4		2	3	6	8	6	2	5	4	3	4	3	5	4	3	3	1	5	2		3			5
Gymnodinium galatheanum																														
Gyrodinium spirale-type														1				1						1			1			
Heterocapsa triquetra	1	1	1																1											
Noctiluca scintillans														1									1							
Noctilucoid sp.																														
Oxyrrhis marina								1							1	1	1	1	1	1	1		1							
Oxytoxum sp.		1								1				1		1			1	1			1		1	1	1			1
Polykrikos sp.											1																			
Prorocentrum gracile																														
Prorocentrum micans																											1			
Prorocentrum minimum																1			1	1	1	1	1	1	1	1	1			1
Prorocentrum sp.																														
Protoperidinioid sp.	2	3		2	3	2		2	2		3	3	3	6	2	1	2	2	4	3	1		1	1	1	2	2			1
Pyrocystis lunula																									1					
Raphidophytes																														
Heterosigma akashiwo										1	1	1	1	1	1	1	1	1	1	1	1	1								

Table 23 cont'd

date	16-Sep			23-Sep			30-Sep			07-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates												
Alexandrium sp.	1	1	1									
Amphidinium sp.												
Ceratium divericatum												
Ceratium furca												
Ceratium fusus	1	1	1				1	1	1	1	1	1
Ceratium lineatum												
Ceratium pentagonum												
Ceratium sp.												
Cochlodinium sp.												
Dinophysioid sp.		1								2	1	
Gonyaulacoid sp.							1				1	
Gymnodinioid sp.	5	6	2	6	8	1	1		1	8	3	6
Gymnodinium galatheanum												
Gyrodinium spirale-type	1	1	1	1	4	2		1		1		
Heterocapsa triquetra												
Noctiluca scintillans	1						1					
Noctilucoid sp.												
Oxyrrhis marina	1											
Oxytoxum sp.			1	1								
Polykrikos sp.												
Prorocentrum gracile												
Prorocentrum micans												
Prorocentrum minimum	1	1	1	1	1	1						
Prorocentrum sp.												
Protoperidinioid sp.	1	2		5	2		2	2		2	1	1
Pyrocystis lunula												
Raphidophytes												
Heterosigma akashiwo										1		

Table 24 : Other flagellates, microzooplankton, dominant species, percent constituent, and total biomass in Glacial Creek samples.

date	01-Jul			08-Jul			15-Jul			22-Jul			29-Jul			05-Aug			12-Aug			19-Aug			26-Aug			02-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																														
Cryptomonads				1				1	1																					
Dictyocha speculum				1	1	1		1	1	1	1	1		1	1			1		1					1	1	1			1
Dinobryon balticum																														
Ebria tripartita																														
Euglenoid								1			2	4								1										
Phaeocystis pouchetii																														
Radiolarian																														
unid. Nanoflagellates	5	4	4	1	2	2		2	4	4	4	6	5	5	3	4	4	4	4	4	3	2	2	2	2	3	3			2
Zooplankton																														
Appendicularian																														
Ciliate	5	4	3	1	5	5		4	4	2	7	6	2	6	2	4	4	3	4	1		1	4	4	4	4	3			5
Copepod			1																											
Nauplius				1																						1				
Pluteus																														
Rotifer																														
Tintinnid								1	2		2							1												
Zoea																														
other																														
Dominant Species/Group																														
name	*Heterocapsa triquetra*	dinoflagellates	*Dinophysis acuta*	*Leptocylindrus danicus*	*Dictyocha speculum*	*Leptocylindrus danicus*	no sample	*Leptocylindrus danicus*	*Leptocylindrus danicus*	*Leptocylindrus danicus*	*Leptocylindrus danicus*	*Leptocylindrus danicus*	*Leptocylindrus danicus*	*Leptocylindrus danicus*	*Leptocylindrus danicus*	*Leptocylindrus danicus*	*Leptocylindrus danicus*	*Leptocylindrus danicus*	*Leptocylindrus danicus*	*Leptocylindrus danicus*	*Leptocylindrus danicus*	*Leptocylindrus danicus*	*Leptocylindrus danicus*	*Leptocylindrus danicus*	*Prorocentrum minimum*	*Ceratium fusus*	*Prorocentrum minimum*	no sample	no sample	*Dictyocha speculum*
count (cells/mL)	60	55	~20	600	42	~200		1800	1200	3600	4700	1500	1300	2700	360	2000	3000	1100	3000	3700	1300	1600	350	520	350	32	110			50
% constituent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Diatoms	25	10	5	70	30	45	50	50	55	75	60	70	80	60	50	80	85	74	55	70	70	75	30	40	4	5	10	5	5	5
Dinoflagellates	35	60	55	15	15	20	30	30	20	15	20	15	5	21	40	5	5	10	25	23	24	23	59	44	91	90	80	40	40	40
Raphidophytes	0	0	0	0	0	0	0	0	0	0	0	0	5	1	0	8	3	10	8	4	4	0	0	0	0	0	0	0	0	0
Other Flagellates	30	10	20	10	40	20	5	5	5	5	10	5	5	3	5	2	2	1	2	1	2	1	1	1	1	1	2	30	30	30
Zooplankton	10	20	20	5	15	15	15	15	20	5	10	10	5	15	5	5	5	5	10	2	0	1	10	15	4	4	8	25	25	25
Biomass													3.0	3.5	2.5	3.5	4.0	3.0	3.0	3.5	3.0	3.5	3.5	3.0	3.5	3.0	2.5	3.0	3.0	3.0

Table 24 cont'd

date	16-Sep			23-Sep			30-Sep			07-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates												
Cryptomonads												
Dictyocha speculum	1	1	1					1	1			1
Dinobryon balticum												
Ebria tripartita				1								
Euglenoid												
Phaeocystis pouchetii												
Radiolarian												
unid. Nanoflagellates	4	4	3	4	4	3	3	3	3	4	3	4
Zooplankton												
Appendicularian												
Ciliate	5	6	9	5	7	4	4	2	4	6	4	8
Copepod												
Nauplius				1						1		
Pluteus												
Rotifer												
Tintinnid												
Zoea												
other												
Dominant Species/Group												
name	*Prorocentrum minimum*	*Prorocentrum minimum*	*Prorocentrum minimum*	*Prorocentrum minimum*	*Thalassiosira spp.*	*Thalassiosira spp.*	*Chaetoceros spp.*	ciliate sp.	ciliate spp.	*Ceratium fusus*	*Ceratium fusus*	*Ceratium fusus*
count (cells/mL)	300	210	120	380	500	150	~150	~20	~10	200	20	11
% constituent	100	100	100	100	100	100	100	100	100	100	100	100
Diatoms	30	25	20	15	55	55	40	0	20	25	35	35
Dinoflagellates	50	50	50	70	25	25	40	45	25	55	45	45
Raphidophytes	0	0	0	0	0	0	0	0	0	1	0	0
Other Flagellates	5	5	5	2	2	2	5	5	25	2	2	2
Zooplankton	15	20	25	13	18	18	15	50	30	17	18	18
Biomass	3.0	2.5	2.5	3.0	3.5	3.0	2.5	2.0	1.5	3.5	2.5	2.0

Table 25 : Diatoms in Pretty Girl Cove samples.

date	14-Jun			21-Jun			28-Jun			05-Jul			12-Jul			19-Jul			26-Jul			02-Aug			09-Aug			16-Aug		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																														
Achnanthes sp.																														
Amphiprora/ Tropidoneis																														
Asterionella japonica																														
Bacteriastrum sp.																														
Biddulphia sp.																														
Campylosira/Plagiogramma																														1
Cerautelina sp.																							1							
Chaetoceros concavicorne																										1		1		
Chaetoceros convolutus							1																							
Chaetoceros sp.	2	4	6	6			5	2	1	3	2	2			3			2	4	3	1	4	7	7		3	1	1	1	
Corethron hystrix																														
Coscinodiscus sp.																														
Dactylisolen sp.	1	1	1	1						1						1		1					1		1	1				
Ditylum brightwellii															1				1			1	1	1	1	1	1	1	1	1
Eucampia zoodiacus																		1				1	1	1		1	1		1	1
Grammatophora sp.																														
Hemialus sp.																														
Lauderia annulata			1																											
Leptocylindrus danicus													1	1	1				1	1			1	1	1	1		1	1	1
Leptocylindrus minimus																						1	1	1	1	1	1	1	1	1
Licmophora sp.							1			1										1										
Melosira sp.																														
Navicula sp.																							1	2						
Nitzschioid sp.			1				1	1		2		1	1	1	2	2	1	1	2	2	1	1	1	2			1		2	
Pleurosigma/ Gyrosigma sp.								1								1		1									1			
Rhizosolenia setigera																														
Rhizosolenia sp.																		1				1		1			1			1
Rhizosolenia stolterfothii																														
Skeletonema costatum	1		1	1			1	1	1	1		1	1	1		1				1	1	1	1	1	1	1	1	1		1
Stephanopyxis sp.																	1				1									
Thalassionema sp.																		1				1	1		1		1	1	1	1
Thalassiosira sp.		1	1				1				1	1	1	1	1	1	1	1		1	2	1	2	3	3	3	2	2	1	1

Table 25 cont'd

date	23-Aug			30-Aug			06-Sep			13-Sep			20-Sep			27-Sep			04-Oct			11-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																								
Achnanthes sp.																								
Amphiproral Tropidoneis																								
Asterionella japonica																								
Bacteriastrum sp.																								
Biddulphia sp.																								
Campylosira/Plagiogramma																								
Cerautalina sp.																					1			
Chaetoceros concavicorne																				1	1			1
Chaetoceros convolutus																								
Chaetoceros sp.	2			2	1	1							1	1		2			6	5	2		3	2
Corethron hystrix																								
Coscinodiscus sp.															1					1			2	1
Dactylisolen sp.																			1	1				
Ditylum brightwellii	1	1	1																		1			
Eucampia zoodiacus																				1				1
Grammatophora sp.																								
Hemialus sp.																								
Lauderia annulata																								
Leptocylindrus danicus	1		1										1	1		1			1					
Leptocylindrus minimus	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			1	1	1			1
Licmophora sp.																								
Melosira sp.					1																			
Navicula sp.																								
Nitzschioid sp.	1	1					1						1	1		1			2	1	1	1		1
Pleurosigma/ Gyrosigma sp.																								
Rhizosolenia setigera																					1			1
Rhizosolenia sp.	1	1						1								1	1						1	1
Rhizosolenia stolterfothii																								
Skeletonema costatum			1						1				1	1	1	1			1	1	1		1	
Stephanopyxis sp.																						1		
Thalassionema sp.		1		1					1															
Thalassiosira sp.	1	1	1				1		1	1		1							1	2	1			2

Table 26 : Dinoflagellates in Pretty Girl Cove samples.

date	14-Jun			21-Jun			28-Jun			05-Jul			12-Jul			19-Jul			26-Jul			02-Aug			09-Aug			16-Aug		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																														
Alexandrium sp.													1		1									1						
Amphidinium sp.																														
Ceratium divericatum																														
Ceratium furca																														
Ceratium fusus																														
Ceratium lineatum																				1	1	1	1	1		1		1	1	
Ceratium pentagonum														1	1															
Ceratium sp.																					1			1						
Cochlodinium sp.																														
Cochlodinium sp. 99																						1	1	1	1	1	1	1	1	1
Dinophysioid sp.	1	1		1			1						1	2		1	2	1		2	2	2	2	2	2		1	2	1	
Gonyaulacoid sp.				1			1			2	1		2	2		2	3	2		1	3	2		1						
Gymnodinioid sp.				3		2	3	3		3	2	1	5	8	4	7	6	5	7	9	10	7	9	10	6	8	9	10	8	6
Gymnodinium galatheanum																														
Gyrodinium spirale-type		1	1	1			1			1			1	1	1	1	1			2	2	1	2	2	2	3	3	1	1	2
Heterocapsa triquetra	1	1		1	1		1	1		1	1		1	1	1	1	1	1	1	1	1		1	1	1			1	1	
Noctiluca scintillans																														
Noctilucoid sp.																														
Oxymhis marina				1			1					1		1												1	1	1	1	1
Oxytoxum sp.										1						1	1		2	1	1	1			1				1	1
Polykrikos sp.				1											1	1	1		1	1	1		1							
Prorocentrum gracile				1			1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Prorocentrum micans																						1			1					1
Prorocentrum sp.																														
Protoperidinioid sp.	2	5	2	3		1	6	2	3	5	2	1	7	7	5	8	7	6	7	8	9	8	8	9	6	9	5	10	7	3
Pyrocystis lunula																														
Raphidophytes																														
Heterosigma akashiwo													1				5	1		5	1	1	1	1	1	1	1	1	1	1

Table 26 cont'd

date	23-Aug			30-Aug			06-Sep			13-Sep			20-Sep			27-Sep			04-Oct			11-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																								
Alexandrium sp.																			1					
Amphidinium sp.																								
Ceratium divericatum																								
Ceratium furca																								
Ceratium fusus																						1		
Ceratium lineatum				1		1				1			1		1	1			1			1		
Ceratium pentagonum																								
Ceratium sp.																								
Cochlodinium sp.																1								
Cochlodinium sp. 99	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1					1	
Dinophysioid sp.	1		1	3	1		2	1								2		1				3	1	
Gonyaulacoid sp.							1						1	3										
Gymnodinioid sp.	7	2	2	8	4	5	9	10	6	10	8	5	7	5	5	8	6	3	7	4	5	6	5	7
Gymnodinium galatheanum																								
Gyrodinium spirale-type	1	2	1	3	1	1	2	2	2	1			2	2	2	5	4	3	3	2	2			
Heterocapsa triquetra	1			1				1		1			1	1		1	1							
Noctiluca scintillans																								
Noctilucoid sp.																								
Oxymhis marina	1		1	1	1		1	1	1															
Oxytoxum sp.	1	1		1		1	1	1		1			1			1			1				1	
Polykrikos sp.																								
Prorocentrum gracile	1			1	1	1	1	1	1	1	1		1	1						1				
Prorocentrum micans	1			1	1			1					1	1	1	1		1	1	1	1	1	1	1
Prorocentrum sp.																								
Protoperidinioid sp.	6	2	1	6	1		5	3	4	7	2		4		3	2	1	2		1	1	2	3	2
Pyrocystis lunula																				1				
Raphidophytes																								
Heterosigma akashiwo	1				1		1						1						1			1		

Table 27 : Other flagellates, microzooplankton, dominant species, percent constituent, and total biomass in Pretty Girl Cove samples.

date	14-Jun			21-Jun			28-Jun			05-Jul			12-Jul			19-Jul			26-Jul			02-Aug			09-Aug			16-Aug		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																														
Cryptomonads													1	1	1	1	1			1										
Dictyocha speculum			1	1	1		1	5	1		1				1			1	1	1			1	1					1	
Dinobryon balticum							1			1																				
Ebria tripartita										1			1			1		1							1	1	1	1		
Euglenoid	1	1	1				1			1						1		1		1										
Phaeocystis pouchetii																														
Radiolarian																														
unid. Nanoflagellates	3	1		4	2	2	5	5	3	3	3	3	2	2	2	4	3	4	3	6	6	5	4	4	4	5	3	5	5	4
Zooplankton																														
Appendicularian																														
Ciliate	2	2		3	1	1	4	2		7	3	1	7	6	3	6	8	2	7	6	6	7	8	8	7	5	4	7	8	7
Copepod																														
Nauplius		1											1								1					1				
Pluteus																														
Rotifer													1	1			2										1			
Tintinnid		1	2							1			2			3	3		1	1	2	1	1	1	3	2	1	2	2	2
Zoea																														
other																														
Dominant Species/Group																														
name	Euglenoid sp.	Chaetoceros spp.	Chaetoceros spp.	nanoflagellates	nanoflagellates	nanoflagellates	Chaetoceros spp.	nanoflagellates	nanoflagellates	Prorocentrum gracile	diatoms	diatoms	Prorocentrum gracile	Prorocentrum gracile	Prorocentrum gracile	small dinoflagellates	Prorocentrum gracile	small dinoflagellates	dinoflagellates	Prorocentrum gracile	Prorocentrum gracile	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99
count (cells/mL)	~400	nd	nd	~10000	~10000	~10000	1000	~4000	~2000	110	~100	~100	60	230	25	500	480	100	~200	360	750	250	290	390	290	1400	350	390	220	300
% constituent																														
Diatoms	10	45	60	40	0	0	59	35	10	30	30	35	10	10	25	10	5	30	30	10	8	35	35	30	35	10	30	25	30	35
Dinoflagellates	30	35	30	10	5	1	20	20	10	35	30	30	50	50	45	40	45	40	35	59	69	40	40	55	40	65	57	60	55	50
Raphidophytes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	2	1	0	0	0
Other Flagellates	50	10	2	45	94	98	20	44	80	5	10	30	10	10	5	20	15	20	5	5	8	2	2	1	4	3	2	1	1	1
Zooplankton	10	10	8	5	1	1	1	1	0	30	20	5	30	30	25	30	35	10	30	25	15	22	22	14	20	20	10	14	14	14
Biomass																						3.5	4.0	3.5	3.5	4.0	3.5	3.0	3.0	3.0

Table 27 cont'd

date	23-Aug			30-Aug			06-Sep			13-Sep			20-Sep			27-Sep			04-Oct			11-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																								
Cryptomonads																								
Dictyocha speculum							1							1	1				1	1	1	1		
Dinobryon balticum	1																							
Ebria tripartita				1																				
Euglenoid	1												1	1										
Phaeocystis pouchetii																								
Radiolarian																								
unid. Nanoflagellates	5	1	2	7	3	2	6	6	4	6	4	4	4	3	2	4	2	3	5	4	3	3	4	3
Zooplankton																								
Appendicularian																								
Ciliate	8	5	1	5	6	4	9	8	6	9	3	3	3	4	5	8	9	4	12	8	2	6	5	3
Copepod															1							1		1
Nauplius															1				1					
Pluteus																								
Rotifer	1																							
Tintinnid	2		1		1	1	2			1	1	1	1	1	1	2	2	1	2			2		
Zoea																								
other																								
Dominant Species/Group																								
name	*Leptocylindrus minimus*	*Ditylum brightwellii*	*Gymnodinium sp.*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	dinoflagellates	dinoflagellates	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Pseudonitzschia sp.*	*Chaetoceros spp.*	diatoms	*Prorocentrum micans*	dinoflagellates	dinoflagellates
count (cells/mL)	7300	~20	~20	1600	60	~50	700	100	35	320	1500	300	770	1690	750	1600	85	40	600	~400	250	130	~80	~50
% constituent																								
Diatoms	69	39	49	35	5	34	22	5	5	5	4	5	5	5	5	5	15	0	55	45	55	5	20	25
Dinoflagellates	20	30	40	50	78	40	35	78	73	70	90	85	85	85	85	85	60	75	20	30	30	80	55	50
Raphidophytes	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
Other Flagellates	1	1	1	5	2	1	3	2	2	2	1	3	3	2	2	1	1	1	3	3	3	1	2	2
Zooplankton	10	30	10	10	15	25	30	15	20	23	5	7	6	8	8	9	24	24	21	22	12	14	23	23
Biomass	4.0	3.0	2.0	4.0	3.0	2.5	3.0	3.0	2.5	3.5	4.0	3.0	4.0	4.0	3.5	4.0	3.0	2.0	3.5	2.5	2.0	3.5	3.0	2.5

Table 28: Diatoms in Bacchante Bay samples.

date	21-Jun			28-Jun			05-Jul			12-Jul			19-Jul			26-Jul			02-Aug			09-Aug			16-Aug			23-Aug		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																														
Achnanthes sp.																														
Amphiproral Tropidoneis												1																		
Asterionella japonica																														
Bacteriastrum sp.																														
Biddulphia sp.																														
Campylosira/Plagiogramma																														
Cerautalina sp.																														
Chaetoceros concavicorne																					1			1						
Chaetoceros convolutus								1										1		1	1	1	1	1		1	1			
Chaetoceros sp.	6	5	5	4	4	2	3	2	2	2		4	1	3	1		1	4	2	3	3	3	5	3	1	1	2	1		
Corethron hystrix																														
Coscinodiscus sp.																														
Dactylisolen sp.	1	1	1	1			1																			1		1		
Ditylum brightwellii							1		1			1							1	1	1	1	1	1	1	1	1	1	1	
Eucampia zoodiacus																														
Grammatophora sp.																														
Hemialus sp.																														
Lauderia annulata		1																												
Leptocylindrus danicus										1								1	1	1		1	1	1						
Leptocylindrus minimus																			1			1	1	1	1	1	1	1	1	
Licmophora sp.										1			1																	
Melosira sp.																														
Navicula sp.					1							1		1					1											
Nitzschioid sp.		2	1				2			1	1	1	1	2	2	1	1	2	2	3	1	2	2	2		2	1			
Pleurosigma/ Gyrosigma sp.																					1					1				
Rhizosolenia setigera																						1	1					1		
Rhizosolenia sp.													1		1								1							
Rhizosolenia stolterfothii																														
Skeletonema costatum	1	1	1	1	1	1	1		1	1	1	1		1	1		1	1	1	1		1	1	1		1	1			
Stephanopyxis sp.																														
Thalassionema sp.														1				1				1	1	1			1	1		
Thalassiosira sp.	1	1	1		1				1		1	1	1	1	2	1	1	3	2	2	2	2	1	2		2	1			

Table 28 cont'd.

date	30-Aug			06-Sep			13-Sep			20-Sep			27-Sep			04-Oct			11-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																					
Achnanthes sp.															1						
Amphiprora/ Tropidoneis																					
Asterionella japonica																					
Bacteriastrum sp.																					
Biddulphia sp.																			1		
Campylosira/Plagiogramma																					
Cerautalina sp.																1	1				
Chaetoceros concavicorne											1	1		1		1	1	1	1	1	
Chaetoceros convolutus															1		1		1		
Chaetoceros sp.			1							2	1		3	2		4	6		2	4	
Corethron hystrix																					
Coscinodiscus sp.																1			1	1	
Dactylisolen sp.																1		1	1	1	
Ditylum brightwellii														1		1			1	1	
Eucampia zoodiacus																					
Grammatophora sp.																					
Hemialus sp.																					
Lauderia annulata																					
Leptocylindrus danicus												1		1		1			1		
Leptocylindrus minimus	1			1	1					1	1		1			1	1		1	1	
Licmophora sp.																					
Melosira sp.															1						
Navicula sp.																		1	1		
Nitzschioid sp.															1	1			1		
Pleurosigma/ Gyrosigma sp.																1			2	2	
Rhizosolenia setigera								1								1	1		1	1	
Rhizosolenia sp.				1									1			2	1	1	1	2	
Rhizosolenia stolterfothii																					
Skeletonema costatum													1		1	1	1	1	1	1	
Stephanopyxis sp.																			1		
Thalassionema sp.											1					1	1		1		
Thalassiosira sp.					1						1	1				3	1	2	3	3	

Table 29 : Dinoflagellates in Bacchante Bay samples.

date	21-Jun			28-Jun			05-Jul			12-Jul			19-Jul			26-Jul			02-Aug			09-Aug			16-Aug			23-Aug		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																														
Alexandrium sp.											1																			
Amphidinium sp.																														
Ceratium divericatum																														
Ceratium furca																														
Ceratium fusus																														
Ceratium lineatum																														
Ceratium pentagonum																														
Ceratium sp.																									1	1				
Cochlodinium sp.																														
Dinophysioid sp.	2			1	1		1	1		1		1	1	2		1		1	3	1	1	3	3	1	2			1	1	
Gonyaulacoid sp.						1	2		1	1	3					1													2	
Gymnodinioid sp.	1	2		4	2	2	5	1	1	5	7	3	7	5	3	6	7	3	10	5	5	8	8	7	6	3	1	6	3	
G ymnodinium galatheanum																														
Gyrodinium spirale-type		1		1			1	1	1	1	1	1	1	1			2	1		1		1	2	2	2	2	1	2	1	
Heterocapsa triquetra	1	1	1	1	1	1				1	1	1	1		1				1	1		1	1		1			1	1	
Noctiluca scintillans																														
Noctilucoid sp.																														
Oxyrrhis marina	1	1		1						1		1	1									1		1	1		1	1	1	
Oxytoxum sp.				1	1											1			1	1			1					1		
Polykrikos sp.																			1	1		1	1	1						
Prorocentrum gracile				1						1	1	1	1			1	1	1	1	1	1	1	1		1	1	1	1	1	
Prorocentrum micans																			1						1			1		
Prorocentrum sp.																									1					
Protoperidinioid sp.	2	3	1	3	3	1	6	3	2	7	5	5	5	6	3	7	4	6	5	3	1	5	4		5	4	2	6	6	
Pyrocystis lunula																														
Raphidophytes																														
Heterosigma akashiwo										1	1		1	1	1	1	1		1						1				1	

Table 29 cont'd

date	30-Aug			06-Sep			13-Sep			20-Sep			27-Sep			04-Oct			11-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																					
Alexandrium sp.																					
Amphidinium sp.	1																				
Ceratium divericatum																					
Ceratium furca																					
Ceratium fusus																					
Ceratium lineatum																				1	
Ceratium pentagonum																					
Ceratium sp.																					
Cochlodinium sp.					1								1								
Dinophysioid sp.	3			4		1							3			2			1		
Gonyaulacoid sp.	1																				
Gymnodinioid sp.	10		5	7	5	7	9	7	4	8	6	6	6	3	3	8	6	5	9	7	
Gymnodinium galatheanum																					
Gyrodinium spirale-type	1		1	1	3	1	1	1		2		1	3	1	2	4	2	1	2		
Heterocapsa triquetra	1			1	1	1	1			1			1		1	1					
Noctiluca scintillans																					
Noctilucoid sp.																					
Oxyrrhis marina				1	1	1					1		1								
Oxytoxum sp.				1			1			1			1			1					
Polykrikos sp.													1								
Prorocentrum gracile	1		1	1	1	1	1	1	1	1	1	1	1			1	1				
Prorocentrum micans				1			1			1			1								
Prorocentrum sp.																					
Protoperidinioid sp.	9		3	5	4	3	7	1	2	8	4	3	5	2	1	3	1	2	3		
Pyrocystis lunula																					
Raphidophytes																					
Heterosigma akashiwo						1				1						1	1				

Table 30 : Other flagellates, microzooplankton, dominant species, percent constituent, and total biomass in Bacchante Bay samples.

date	21-Jun			28-Jun			05-Jul			12-Jul			19-Jul			26-Jul			02-Aug			09-Aug			16-Aug			23-Aug		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																														
Cryptomonads										1	1	1	1	1																
Dictyocha speculum	1	1	1	1	1						1	1	1	1				1		1	1									
Dinobryon balticum																														
Ebria tripartita					1					1															1					
Euglenoid							1	1		1	1		1	1			1								1				1	
Phaeocystis pouchetii																														
Radiolarian		1																												
unid. Nanoflagellates	2	3	2	4	4	5	2	2	4	4	3	2	6	5	3	3	6	3	5	5	4	4	5	3	5	5	2	5	4	
Zooplankton																														
Appendicularian																														
Ciliate	1	2	1	3	2		5	3	4	5	5	6	7	5	5	6	5	5	9	7	3	5	5	4	7	4	1	6	4	
Copepod																														
Nauplius								1																						
Pluteus																														
Rotifer							2		1	1			1				1					1								
Tintinnid		2		2			1	2	1	2	2	4	1	5	2	3		1	3	1	1	3	1				3	3	3	
Zoea																														
other																														
Dominant Species/Group																														
name	*Chaetoceros spp.*	*Chaetoceros spp.*	*Chaetoceros spp.*	diatoms	nanoflagellates	nanoflagellates	*Chaetoceros spp.*	*Chaetoceros spp.*	diatoms	dinoflagellates	dinoflagellates	diatoms	sm. dinoflagellates	ciliates &tintinnids	*Skeletonema costatum*	*Prorocentrum gracile*	*Prorocentrum gracile*	diatoms	*Prorocentrum gracile*	*Prorocentrum gracile*	*Chaetoceros convolutus*	dinoflagellates	diatoms	diatoms	*Prorocentrum gracile*	diatoms	diatoms	*Prorocentrum gracile*	*Prorocentrum gracile*	no sample
count (cells/mL)	~800	880	~200	3400	4000	~4000	1000	~50	~150	300	550	~800	100	220	~100	250	600	350	570	310	~12	250	3000	500	320	500	~200	300	180	
% constituent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Diatoms	90	90	90	70	30	10	58	30	30	25	10	40	5	28	35	5	5	40	30	30	50	30	45	40	5	50	60	10	15	15
Dinoflagellates	5	5	5	24	29	10	20	30	25	44	44	20	35	20	25	50	55	30	45	50	30	40	35	35	74	30	23	79	74	74
Raphidophytes	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0
Other Flagellates	5	0	4	5	40	80	2	10	25	10	15	10	30	20	10	5	5	5	2	2	2	5	5	5	5	5	2	1	1	1
Zooplankton	0	5	1	1	1	0	20	30	20	20	30	30	30	32	30	40	34	25	22	18	18	25	15	20	15	15	15	10	10	10
Biomass																			3.5	3.0	3.0	3.5	3.5	2.5	3.0	2.0	2.0	3.0	2.5	2.5

Table 30 cont'd

date	30-Aug			06-Sep			13-Sep			20-Sep			27-Sep			04-Oct			11-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																					
Cryptomonads																					
Dictyocha speculum						1	1	1						1			1		1	1	
Dinobryon balticum																					
Ebria tripartita	1			1																	
Euglenoid										1	1		1					1			
Phaeocystis pouchetii																					
Radiolarian																					
unid. Nanoflagellates	5		4	4	3	3	3	5	3	4	5	2	3	3	3	6	4	3	6	4	
Zooplankton																					
Appendicularian												1									
Ciliate	8		2	8	9	3	9	8	2	7	7	5	6	6	2	10	6	6	8	7	
Copepod																			1		
Nauplius				1																	
Pluteus																					
Rotifer	1			1																	
Tintinnid	5		1	2	1		2	1		1					2	1			3		
Zoea																					
other																					
Dominant Species/Group																					
name	*Prorocentrum gracile*	no sample	dinoflagellates	*Prorocentrum gracile*	ciliates	*Prorocentrum gracile*	*Prorocentrum gracile*	ciliates	dinoflagellates	*Gymnodinium sp.*	*Cochlodinium sp. 99*	dinoflagellates	*Cochlodinium sp. 99*	*Chaetoceros concavicorne*	dinoflagellates	*Cochlodinium sp. 99*	*Chaetoceros concavicorne*	*Chaetoceros concavicorne*	*Biddulphia aurita*	*Chaetoceros concavicorne*	no sample
count (cells/mL)	560		~100	440	~40	~30	650	120	~20	2500	200	~300	175	15	~30	275	61	21	~400	40	
% constituent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Diatoms	1	1	1	1	20	0	1	3	0	2	40	30	10	60	30	45	80	65	70	75	75
Dinoflagellates	75	73	70	84	30	65	80	43	55	80	45	50	70	15	35	35	10	20	15	15	15
Raphidophytes	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
Other Flagellates	9	6	4	5	5	5	4	4	20	3	1	1	5	2	10	3	1	1	2	1	1
Zooplankton	15	20	25	10	45	30	15	50	25	14	14	19	15	23	25	16	9	14	13	9	9
Biomass	4.0	3.0	2.5	4.0	2.0	2.0	3.5	3.0	1.5	3.5	3.5	3.0	3.5	2.5	1.5	4.0	3.5	3.0	3.5	3.5	3.0

Table 31 : Diatoms in Shelter Channel samples.

date	14-Jun			21-Jun			28-Jun			05-Jul			12-Jul			19-Jul			26-Jul			02-Aug			09-Aug			16-Aug		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																														
Achnanthes sp.																														
Amphiprora/ Tropidoneis																				1	1									
Asterionella japonica																														
Bacteriastrum sp.																														
Biddulphia sp.																														
Campylosira/Plagiogramma																														
Cerautalina sp.		1																								1	1			
Chaetoceros concavicorne																						1							1	
Chaetoceros convolutus													1	1	1				1	1	1		1	1	1					
Chaetoceros sp.	4	2	2	5	2	1	5	3	3	4	4	3	5	4	4	1	1	1	7	9	6	8	5	5	5	3	1	3	2	3
Corethron hystrix																						1								
Coscinodiscus sp.		1	1								1				1															1
Dactylisolen sp.	1		1	1			1	1											1		1									
Ditylum brightwellii		1	1							1			1	1					1	1	1	1	1	1	1	1	1	1	1	1
Eucampia zoodiacus																				1			1	1	1	1	1			1
Grammatophora sp.																														
Hemialus sp.																														
Lauderia annulata																														
Leptocylindrus danicus														1	1				1	1	1	1	1	1		1				1
Leptocylindrus minimus																						1	1	1	1	1	1	1	1	1
Licmophora sp.															1													1		
Melosira sp.																														
Navicula sp.																				2	1		1							
Nitzschioid sp.	1				1	1	2	2		3	2	1	2	3	3	1	1	1	2	3	2	3	2	2	2	2	2	2	2	2
Pleurosigma/ Gyrosigma sp.			1							1													1			1	1			
Rhizosolenia setigera																								1	1					
Rhizosolenia sp.														1	1					1		1	1	1		1	1			
Rhizosolenia stolterfothii																														
Skeletonema costatum	1			1	1		1			1	1	1	1	1	1		1	1	1	1	1	1	1		1	1	1			1
Stephanopyxis sp.														1																
Thalassionema sp.											1			1	1					1			1	1	1	1	1		1	1
Thalassiosira sp.						1	1	1	1	1	1	1	1	2	2		1	2	2	3	3	2	4	3	2	1	3	1	1	2

Table 31 cont'd

date	23-Aug			30-Aug			06-Sep			13-Sep			20-Sep			27-Sep			04-Oct			11-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																								
Achnanthes sp.																								
Amphiproral Tropidoneis																								
Asterionella japonica																								
Bacteriastrum sp.																								
Biddulphia sp.																								
Campylosira/Plagiogramma																								
Cerautalina sp.																			1					
Chaetoceros concavicorne																			1	1	1		1	1
Chaetoceros convolutus																							1	
Chaetoceros sp.	1	2	2	2		2			3						1	5		2	5	5	6	7	3	1
Corethron hystrix																								
Coscinodiscus sp.																	1							
Dactylisolen sp.		1																			1	1		
Ditylum brightwellii		1	1																	1	1			
Eucampia zoodiacus																					1			
Grammatophora sp.																								
Hemialus sp.																								
Lauderia annulata																							1	1
Leptocylindrus danicus		1		1			1		1						1						1			
Leptocylindrus minimus	1	1	1	1		1	1	1	1	1	1			1	1	1	1		1	1	1		1	
Licmophora sp.																								
Melosira sp.																								
Navicula sp.										1														
Nitzschioid sp.	1	1	1							1				1		2			2	2	2	1	1	1
Pleurosigma/ Gyrosigma sp.																								
Rhizosolenia setigera																		1	1	1	1	1	1	1
Rhizosolenia sp.									1						1	1		1		1	1	1	2	1
Rhizosolenia stolterfothii																								
Skeletonema costatum	1			1					1							1			1	1		1	1	
Stephanopyxis sp.																				1				
Thalassionema sp.		1	1												1						1	1		
Thalassiosira sp.		1	2	1		1			2	1								1	1	2	2	1	2	

Table 32 : Dinoflagellates in Shelter Channel samples.

date	14-Jun			21-Jun			28-Jun			05-Jul			12-Jul			19-Jul			26-Jul			02-Aug			09-Aug			16-Aug		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																														
Alexandrium sp.																								1						
Amphidinium sp.																														
Ceratium divericatum																														
Ceratium furca																														
Ceratium fusus																														
Ceratium lineatum																						1	1			1		1	1	1
Ceratium pentagonum																				1										
Ceratium sp.																														
Cochlodinium sp.																														1
Cochlodinium sp. 99																						1	1	1	1	1	1	1	1	1
Dinophysioid sp.		1	1				2							1	1				1		1	2		1		2				
Gonyaulacoid sp.			1	1	1		1	1		2				2			2	1												
Gymnodinioid sp.	1		1	2			4	4	1	6	2		3	6	4	4	7	3	8	7	3	7	10	10	5	7	5	6	9	6
Gymnodinium galatheanum															?															
Gyrodinium spirale-type	1	1	1	1			1			1			1	1	1	1	1	1	1	2	1	2	2	2	1	1		2	1	1
Heterocapsa triquetra				1			1	1		1	1		1	1	1		1		1	1	1	1	1			1		1	1	
Noctiluca scintillans																														
Noctilucoid sp.																										1				
Oxyrrhis marina								1					1		1											1		1	1	1
Oxytoxum sp.							1			1		1							1	1						1		1	1	
Polykrikos sp.																						1	1			1				
Prorocentrum gracile	1						1			1						1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Prorocentrum micans																						1						1		
Prorocentrum sp.																														
Protoperidinioid sp.	3	2	3	5			4	4		8	5	1	5	5	3	3	6	4	4	4	2	9	10	3	5	9	3	6	4	4
Pyrocystis lunula																														
Raphidophytes																														
Heterosigma akashiwo										1						1	1			1	1	1	1	1	1	1	1	1		

Table 32 cont'd

date	23-Aug			30-Aug			06-Sep			13-Sep			20-Sep			27-Sep			04-Oct			11-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																								
Alexandrium sp.																			1	1		1		
Amphidinium sp.				1			1																	
Ceratium divericatum																								
Ceratium furca																								
Ceratium fusus																			1					
Ceratium lineatum		1		1		1				1						1			1			1		1
Ceratium pentagonum																								
Ceratium sp.																								
Cochlodinium sp.									1														1	
Cochlodinium sp. 99	1	1	1	1			1	1	1	1	1	1	1	1	1	1	1		1					
Dinophysioid sp.		1		2			1		1										3			3		
Gonyaulacoid sp.		1																						
Gymnodinioid sp.	4	6	2	8			5	6	6	7	5	4	3	3	4	6	5	5	6	5	6	7	3	7
Gymnodinium galatheanum																								
Gyrodinium spirale-type	1	2		2			2	1	2		1	1	2	1	2	1	2	2	1	2	2	2	2	
Heterocapsa triquetra		1		1		1	1	1	1	1						1	1		1			1		
Noctiluca scintillans																								
Noctilucoid sp.																								
Oxyrrhis marina	1	1	1	1			1																	
Oxytoxum sp.	1	1	1	1									1									1		
Polykrikos sp.																								
Prorocentrum gracile	1	1	1	1		1	1			1	1	1	1	1	1	1		1	1	1	1	1		
Prorocentrum micans									1				1						1	1	1	1	1	
Prorocentrum sp.																								
Protoperidinioid sp.	4	5	3	6		1	3	1	4	3			1	2	1	3			3	5	3	5	4	
Pyrocystis lunula																								
Raphidophytes																								
Heterosigma akashiwo							1		1				1							1				

Table 33 : Other flagellates, microzooplankton, dominant species, percent constituent, and total biomass in Shelter Channel samples.

date	14-Jun			21-Jun			28-Jun			05-Jul			12-Jul			19-Jul			26-Jul			02-Aug			09-Aug			16-Aug		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																														
Cryptomonads				1									1	2	2															
Dictyocha speculum	1			1	1	1								1			1	1				1	1	1		1				
Dinobryon balticum							1																					1		
Ebria tripartita							1					1		1						1						1		1		
Euglenoid	1			1			1				1					1	1					1								
Phaeocystis pouchetii																														
Radiolarian																														
unid. Nanoflagellates	1		2	4	5	4	5	6	4	5	5	4	3	2	2	5	4	6	5	5	5	6	6	4	4	4	3	6	3	5
Zooplankton																														
Appendicularian																														
Ciliate	2	3	1	6	3	2	4	4	1	4	4	2	5	6	4	7	7	4	8	6	2	10	7	9	6	8	2	8	5	4
Copepod						1																							1	1
Nauplius																														
Pluteus																													1	1
Rotifer				1														1	1											
Tintinnid	3			1	1		3	1		3			3			2	3	2	3			1		1	3	1		3		
Zoea																														
other																														
Dominant Species/Group																														
name	*Chaetoceros spp.*	none	dinoflagellates	nanoflagellates	nanoflagellates	nanoflagellates	*Chaetoceros spp.*	diatoms	nanoflagellates	*Ch. spp & S. costatum*	*Chaetoceros spp.*	diatoms	*Skeletonema costatum*	diatoms	diatoms	*Prorocentrum gracile*	small dinoflagellates	small dinoflagellates	*Chaetoceros spp.*	*Chaetoceros spp.*	*Chaetoceros spp.*	*Prorocentrum gracile*	*Ditylum brightwellii*	*Ditylum brightwellii*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	diatoms	*Cochlodinium sp. 99*	dinoflagellates	*Ditylum brightwellii*
count (cells/mL)				10000	10000	10000	2000	550	~2000	4000	900	~100	1800	3000	750	80	230	~50	520	~1500	750	330	~40	~30	70	240	750	250	~200	100
% constituent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Diatoms	50	50	20	40	5	1	60	50	45	45	55	70	58	63	63	5	5	25	35	60	70	45	50	55	35	15	50	40	40	65
Dinoflagellates	29	30	50	5	1	0	20	5	1	30	20	10	25	20	20	40	40	30	30	20	20	30	30	30	40	65	43	45	45	24
Raphidophytes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	5	0	0	0	0
Other Flagellates	1	0	2	45	90	89	5	40	53	5	5	15	2	2	2	25	20	20	10	5	5	3	3	2	3	2	2	1	1	1
Zooplankton	20	20	28	10	4	10	15	5	1	20	20	5	15	15	15	30	35	25	25	15	5	21	16	13	20	13	5	14	14	10
Biomass																						4.0	3.5	3.5	3.0	3.5	3.0	3.0	2.5	2.5

Table 33 cont'd

date	23-Aug			30-Aug			06-Sep			13-Sep			20-Sep			27-Sep			04-Oct			11-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																								
Cryptomonads																								
Dictyocha speculum		1						1	1	1		1			1	1		1			1		1	
Dinobryon balticum																								
Ebria tripartita				1			1																	
Euglenoid							1		1	1			1								1		1	
Phaeocystis pouchetii																								
Radiolarian									1			1												1
unid. Nanoflagellates	5	6	4	4		3	10	9	5	5	3	4	5	4	2	5	4	4	6	4	3	7	5	5
Zooplankton																								
Appendicularian																								
Ciliate	4	7	4	7		3	10	7	6	9	6	4	5	5	3	7	7	2	7	6	4	5	3	4
Copepod																								
Nauplius		1																		1				
Pluteus																								
Rotifer																			1					
Tintinnid				2			3	1		1						1			1	1		1		
Zoea																								
other		1																						
Dominant Species/Group																								
name	*Leptocylindrus minimus*	*Leptocylindrus minimus*	*Ditylum brightwellii*	*Prorocentrum gracile*	no sample	*Prorocentrum gracile*	*Cochlodinium sp. 99*	dinoflagellates	diatoms	dinoflagellates	dinoflagellates	dinoflagellates	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	ciliates	dinoflagellates	diatoms	diatoms	*Rhizosolenia setigera*	*Skeletonema costatum*	*Chaetoceros spp.*	*Chaetoceros concavicorne*
count (cells/mL)	800	600	~10	280		ti	115	~200	~200	~100	~50	~20	680	100	20	40	~20	~20	300	180	30	~100	~100	ti
% constituent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Diatoms	63	49	45	20	25	30	3	10	30	10	5	0	0	5	30	30	5	40	35	35	65	40	50	50
Dinoflagellates	20	40	44	55	45	35	45	35	25	45	50	55	90	80	40	50	40	45	30	30	20	40	30	30
Raphidophytes	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Other Flagellates	2	1	1	5	5	5	21	25	20	5	5	15	2	2	5	5	5	5	10	9	5	5	5	5
Zooplankton	15	10	10	20	25	30	30	30	25	40	40	30	8	13	25	15	50	10	25	25	10	15	15	15
Biomass	3.0	3.5	2.0	3.5	2.5	1.5	3.0	2.5	2.0	2.0	2.0	1.5	3.5	2.5	2.0	2.5	2.0	2.0	3.0	2.5	3.5	3.5	2.5	2.0

Table 34 : Diatoms in Michaelson Rocks samples.

date	Jun-23			Jun-30			Jul-07			Jul-14			Jul-21			Jul-28			Aug-04			Aug-11			Aug-18			Aug-25		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																														
Achnanthes sp.																														
Amphiproral Tropidoneis																														
Asterionella japonica																														
Bacteriastrum sp.																														
Biddulphia sp.																			1											
Campylosira/Plagiogramma																														
Cerautalina sp.																														
Chaetoceros concavicorne																														
Chaetoceros convolutus					1					1	1	1		1					1	1		1	1	1	1	1	1	1	1	1
Chaetoceros sp.	5	2	5	4	5	4	6	5	4	4	3	6	3	3	1	1			7	6	5	6	6	6	4	6	5	1	6	4
Corethron hystrix																														
Coscinodiscus sp.																				1							1			
Dactylisolen sp.				1	1		1	1	1																					
Ditylum brightwellii	1			1	1	1	1	1	1	1	1	1			1							1								
Eucampia zoodiacus																							1							
Grammatophora sp.																														
Hemialus sp.																														
Lauderia annulata																														
Leptocylindrus danicus										1	1	1	1									1	1		1	1	1	1	1	1
Leptocylindrus minimus																									1		1			
Licmophora sp.																														
Melosira sp.																														
Navicula sp.							1	1	1	1		1				1							1			1	1			
Nitzschioid sp.				1	2	1	1	1	1	1	1	2	1			1	1		2	3	1	2	2	2	3	2	2		2	1
Pleurosigma/ Gyrosigma sp.					1	1				1	1	1					1			1						1				
Rhizosolenia setigera	1			1	1		1																							
Rhizosolenia sp.																									1	2				
Rhizosolenia stolterfothii																														
Skeletonema costatum	1	1	1	1	1	1	1	1	1	1	1	1	1	1			1				1	1	1	1	1	1	1			1
Stephanopyxis sp.																														
Thalassionema sp.				1	1		1	1	1			1		1																
Thalassiosira sp.	1	1	1	1	2	3	2	1	2	1	2	1	2	2	1	1	1	2	3	3	2	3	2	3		2	2	1	1	2

Table 34 cont'd

date	Sep-01			Sep-08			Sep-15			Sep-22			Sep-29			Oct-06			Oct-13			Oct-20			Oct-26		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																											
Achnanthes sp.																											
Amphiproral Tropidoneis																											
Asterionella japonica																											
Bacteriastrum sp.																											
Biddulphia sp.																											
Campylosira/Plagiogramma																											
Cerautalina sp.																											
Chaetoceros concavicorne																											
Chaetoceros convolutus																											
Chaetoceros sp.	1									5	3	3			1								1				
Corethron hystrix																											
Coscinodiscus sp.							1				1								1	1		1			1		1
Dactylisolen sp.																											
Ditylum brightwellii																											
Eucampia zoodiacus																											
Grammatophora sp.																											
Hemialus sp.																											
Lauderia annulata																											
Leptocylindrus danicus											1		1														
Leptocylindrus minimus															1												
Licmophora sp.																											
Melosira sp.																											
Navicula sp.															1						1						
Nitzschioid sp.									1									1						1		1	
Pleurosigma/ Gyrosigma sp.																											
Rhizosolenia setigera																											
Rhizosolenia sp.										2	1		1				1										
Rhizosolenia stolterfothii																											
Skeletonema costatum					1					1	1	1								1					1		
Stephanopyxis sp.																											
Thalassionema sp.																											
Thalassiosira sp.			1				1							1		1											

Table 35 : Dinoflagellates in Michaelson Rocks samples.

date	Jun-23			Jun-30			Jul-07			Jul-14			Jul-21			Jul-28			Aug-04			Aug-11			Aug-18			Aug-25		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																														
Alexandrium sp.																														
Amphidinium sp.																														
Ceratium divericatum																														
Ceratium furca																														
Ceratium fusus																														
Ceratium lineatum																		*										1	1	1
Ceratium pentagonum																														
Ceratium sp.																														
Cochlodinium sp.																							1		1			1	1	1
Dinophysioid sp.					2					1						1							1			1	1	4		2
Gonyaulacoid sp.			1	1																										
Gymnodinioid sp.	1	2		3	5		1	1	3	1	2	2	2	5	3	4	8	5	2	2	2	2	4	2	2	3	3	2	3	7
Gymnodinium galatheanum																														
Gyrodinium spirale-type		1	1		1				1		1	1		1	1	1	2	1				1	2	2	1	2	1	1		1
Heterocapsa triquetra							1	1						1	1	1	1	1												
Noctiluca scintillans																														
Noctilucoid sp.																														
Oxyrrhis marina		1																												1
Oxytoxum sp.		1			1	1		1		1		1		1																1
Polykrikos sp.																1	1							1	1	1		1		
Prorocentrum gracile																										1		1	1	1
Prorocentrum micans																														
Prorocentrum sp.																									1	1				
Protoperidinioid sp.	2	4	5	5	4	4	4	5	2	3	1	2	2	5	2	7	5	3	2	7	3	2	5	2	2	4	1	5	5	2
Pyrocystis lunula																														
Raphidophytes																														
Heterosigma akashiwo							1						1		1											1		1	1	1

Table 35 cont'd

date	Sep-01			Sep-08			Sep-15			Sep-22			Sep-29			Oct-06			Oct-13			Oct-20			Oct-26		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																											
Alexandrium sp.														1	1												
Amphidinium sp.			1																								
Ceratium divericatum																											
Ceratium furca																											
Ceratium fusus																											
Ceratium lineatum	1	1	1	1			1		1	1	1								1								
Ceratium pentagonum																											
Ceratium sp.																											
Cochlodinium sp.	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Dinophysioid sp.	1	1	3	3	3		1	2	2	1	2											3					
Gonyaulacoid sp.	1	1													1												
Gymnodinioid sp.	4	7	5	3	1		5	6	5	6	3	6	1	3	5	6	5	5	2	3	2	3	3	2	3	3	1
Gymnodinium galatheanum																											
Gyrodinium spirale-type		2	1	1				1	1			3	1	1	3	2	3		2	1		1	1				
Heterocapsa triquetra							1			1	1																
Noctiluca scintillans																											
Noctilucoid sp.																											
Oxymhis marina																											
Oxytoxum sp.	1		1	1	1		1	1	1	1	1	1			1									1			
Polykrikos sp.																											
Prorocentrum gracile	1	1	1	1	1		1	1	1	1	1	1			1	1			1								
Prorocentrum micans							1		1	1	1	1			1	1			1								
Prorocentrum sp.																											
Protoperidinioid sp.	4	6	3	3	3		6	5	3	6	3	2	2	2	3	3			1			1				1	
Pyrocystis lunula																											
Raphidophytes																											
Heterosigma akashiwo			1				1	1		1		1															1

Table 36 : Other flagellates, microzooplankton, dominant species, percent constituent, and total biomass in Michaelson Rocks samples.

date	Jun-23			Jun-30			Jul-07			Jul-14			Jul-21			Jul-28			Aug-04			Aug-11			Aug-18			Aug-25		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																														
Cryptomonads										1				1	1															
Dictyocha speculum							1									1	1	1												
Dinobryon balticum																														
Ebria tripartita	1																													
Euglenoid								1								1														
Phaeocystis pouchetii																														
Radiolarian																					1								1	
unid. Nanoflagellates	2	5	2	5	4	3	4	3	3	2	2	1	6	4	5	8	4	3	5	3	3	4	4	3	4	4	3	3	3	2
Zooplankton																														
Appendicularian																														
Ciliate	1	1	1	4	5	1	4	3	4	1	3	4	3	5	2	9	6	5	3	3	5	4	4	4	5	6	2	5	1	3
Copepod												1																		
Nauplius													1																	
Pluteus																														
Rotifer																1							1		1					1
Tintinnid	1	1	1		1								2			1	2	1							2	2	1			
Zoea																														
other																														
Dominant Species/Group																														
name	*Chaetoceros spp.*	dinoflagellates	none	*Chaetoceros spp.*	*Chaetoceros spp.*	mixed diatoms	*Chaetoceros spp.*	mixed diatoms	mixed diatoms	mixed diatoms	mixed diatoms	mixed diatoms	small flagellates	mixed diatoms	*Thalassiosira sp.*	dinoflagellates	dinoflagellates	dinoflagellates	*Thalassiosira eccentrica*	*Thalassiosira spp.*	*Thalassiosira spp.*	*Chaetoceros debilis*	*Chaetoceros debilis*	*Thalassiosira spp.*	*Chaetoceros spp.*	*Chaetoceros spp.*	*Chaetoceros spp.*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*
count (cells/mL)	400	100		600	~1500	2500	800	2000	2000	700	600	1000	~5000	~50	~10	~150	~50	~30	45	80	25	750	640	90	500	~800	~400	650	340	285
% constituent																														
Diatoms	97	30	33	70	84	86	80	80	85	91	78	83	22	30	40	10	10	10	80	75	70	77	77	84	89	88	91	4	25	20
Dinoflagellates	1	36	33	15	5	3	5	10	8	5	10	5	25	23	30	45	50	50	10	15	15	15	15	10	5	5	5	75	70	75
Raphidophytes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	15	2	1
Other Flagellates	1	33	33	10	10	10	10	5	5	2	2	2	28	22	20	10	10	10	5	5	5	3	3	1	1	1	1	1	1	1
Zooplankton	1	1	1	5	1	1	5	5	2	2	10	10	25	25	10	35	30	30	5	5	10	5	5	5	5	5	3	5	2	3
Biomass																			3.0	3.5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.5	3.5	3.0

Table 36 cont'd

date	Sep-01			Sep-08			Sep-15			Sep-22			Sep-29			Oct-06			Oct-13			Oct-20			Oct-26		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																											
Cryptomonads																											
Dictyocha speculum																									1		
Dinobryon balticum																											
Ebria tripartita										1																	
Euglenoid																											
Phaeocystis pouchetii																											
Radiolarian																											
unid. Nanoflagellates	3	1	5	2	2		3	3	4	3	2	5	3	4	2	3	4	5	3	5	4	5	5	4	4	5	4
Zooplankton																											
Appendicularian										1																	
Ciliate	4	4	3	3	1		2	2	1	4	2	4	3	2	3	2	4	1	3	1	1	7	2	2	4	2	1
Copepod									1	1																	
Nauplius							1			1	1					1						1					
Pluteus																											
Rotifer		1																							1		
Tintinnid		1	1	1						1																	
Zoea																											
other																											
Dominant Species/Group																											
name	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	dinoflagellates	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	dinoflagellates	dinoflagellates	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	dinoflagellates	dinoflagellates	dinoflagellates	nanoflagellates
count (cells/mL)	910	780	230	6500	3100		800	1100	850	300	550	920	130	60	35	70	~50	~30	200	7	4	10	5	6	~10	~5	~100
% constituent																											
Diatoms	1	0	1	0	1	1	2	0	1	40	32	25	5	1	2	5	5	10	5	20	10	20	5	5	20	10	10
Dinoflagellates	90	90	90	99	97	97	92	97	96	45	55	55	85	90	85	85	70	65	75	70	50	40	55	50	35	45	4
Raphidophytes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Other Flagellates	1	1	1	0	1	1	2	1	1	1	5	10	1	1	1	1	2	10	3	5	20	5	20	20	20	35	75
Zooplankton	8	9	8	1	1	1	4	2	2	14	8	10	9	8	12	9	23	15	17	5	10	35	20	25	25	10	10
Biomass	4.0	3.5	3.0	4.5	4.0	4.0	4.0	4.0	4.0	3.5	3.0	3.5	2.5	3.0	2.5	2.5	2.0	1.5	3.0	2.0	1.0	2.0	1.5	1.0	1.5	1.0	1.0

Table 37 : Diatoms in Thorpe Point samples.

date	Jun-23			Jun-30			Jul-07			Jul-14			Jul-21			Jul-28			Aug-04			Aug-11			Aug-18			Aug-25		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																														
Achnanthes sp.																														
Amphiproral Tropidoneis																														
Asterionella japonica																														
Bacteriastrum sp.																														
Biddulphia sp.	1																						1							
Campylosira/Plagiogramma																														
Cerautalina sp.																														
Chaetoceros concavicorne																						1				1				
Chaetoceros convolutus					1			1		1	1	1	1	1	1				1	1		1	1	1	1	1	1	1	1	1
Chaetoceros sp.	5	4	4	5	4	1	4	5	4	4	4	2	3	4	1	2	1	1	6	5	4	5	6	5	5	5	4	3	2	2
Corethron hystrix																														
Coscinodiscus sp.																									1	1	1			
Dactylisolen sp.		1		1			1	1																						
Ditylum brightwellii	1	1	1	1	1	1	1	1	1	1	1	1											1							
Eucampia zoodiacus																						1								
Grammatophora sp.	1																													
Hemialus sp.																														
Lauderia annulata	1	1	1																											
Leptocylindrus danicus				1						1	1	1		1						1				1	1	1		1	1	1
Leptocylindrus minimus																													1	1
Licmophora sp.														1					1									1		1
Melosira sp.																									1					
Navicula sp.		1	1	1			1	1	1	1	1	1																	1	2
Nitzschioid sp.	1	1		1			1	1	1	1	1	2	1	1		2		1	3	2	2	2	1	1	1	1		2	2	
Pleurosigma/ Gyrosigma sp.		1			1					1	1									1					1					
Rhizosolenia setigera				1			1	1																						
Rhizosolenia sp.																			1	1						1				
Rhizosolenia stolterfothii																														
Skeletonema costatum	1	1	1	1	1		1	1	1	1	1	1	1		1					1		1	1	1	1	1	1	1		1
Stephanopyxis sp.					1																									
Thalassionema sp.	1		1					1					1	1								1			1			1		
Thalassiosira sp.	2	2	2	1	1	1	2	3	2	3	3	4	2	2	2	1	1		3	2	1	3	3	3	3	2	3		1	1

Table 37 cont'd

date	Sep-01			Sep-08			Sep-15			Sep-22			Sep-29			Oct-06			Oct-13			Oct-20			Oct-26		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																											
Achnanthes sp.				1																							
Amphiprora/ Tropidoneis																											
Asterionella japonica																											
Bacteriastrum sp.																											
Biddulphia sp.																			1								
Campylosira/Plagiogramma							1	1									1										
Cerautalina sp.																											
Chaetoceros concavicorne																											
Chaetoceros convolutus																											
Chaetoceros sp.							1	1		4	3	2				1									1		
Corethron hystrix																											
Coscinodiscus sp.		1										1							1	1				1			
Dactylisolen sp.																											
Dityfum brightwellii																											
Eucampia zoodiacus										1																	
Grammatophora sp.																											
Hemialus sp.																											
Lauderia annulata																											
Leptocylindrus danicus												1					1										
Leptocylindrus minimus										1	1																
Licmophora sp.																		1									
Melosira sp.																									1		
Navicula sp.																											
Nitzschioid sp.							1			1	1																
Pleurosigma/ Gyrosigma sp.																											
Rhizosolenia setigera																											
Rhizosolenia sp.							1			1	1		2	1	1	1											
Rhizosolenia stolterfothii																											
Skeletonema costatum							1	1	1	1	1	1															
Stephanopyxis sp.																											
Thalassionema sp.			1																								
Thalassiosira sp.			1				2	1	1			1						1									

Table 38 : Dinoflagellates in Thorpe Point samples.

date	Jun-23			Jun-30			Jul-07			Jul-14			Jul-21			Jul-28			Aug-04			Aug-11			Aug-18			Aug-25		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																														
Alexandrium sp.																			1	1	1				1					
Amphidinium sp.																														
Ceratium divericatum																														
Ceratium furca																														
Ceratium fusus																												1		1
Ceratium lineatum																														
Ceratium pentagonum																														
Ceratium sp.																														
Cochlodinium sp.																									1	1		1	1	1
Cochlodinium sp. 99							1	1																	1			1		
Dinophysioid sp.										1			1	1																
Gonyaulacoid sp.				1	1	1																								
Gymnodinioid sp.	2	2					2	2	1	2	4	4	6	3	2	5	3	3	2	4	2	5	4	2	6	4	5	7	4	5
Gymnodinium galatheanum																														
Gyrodinium spirale-type								1		1			1	1	1	1			1	3	2	2	2	1	2	2	2	2	2	
Heterocapsa triquetra													1			1									1					
Noctiluca scintillans																														
Noctilucoid sp.																													1	
Oxyrrhis marina																												1	1	
Oxytoxum sp.	1	1	1		1	1			1	1	1	1				1									1	1				
Polykrikos sp.																									1	1		1	1	1
Prorocentrum gracile																														
Prorocentrum micans																									1					
Prorocentrum sp.																														
Protoperidinioid sp.	7	4	1	1	4	2	4	5	3	2	6	4	4	3	2	7	3	2	3	6	4	3	3	2	4	2	2	5	2	1
Pyrocystis lunula						1	1																							
Raphidophytes																														
Heterosigma akashiwo							1						1										1		1			1	1	1

Table 38 cont'd

date	Sep-01			Sep-08			Sep-15			Sep-22			Sep-29			Oct-06			Oct-13			Oct-20			Oct-26		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																											
Alexandrium sp.							1	1	1	1		1															
Amphidinium sp.																											
Ceratium divericatum																											
Ceratium furca																											
Ceratium fusus																											
Ceratium lineatum	1	1	1	1	1		1	1			1	1	1		1												
Ceratium pentagonum																											
Ceratium sp.																											
Cochlodinium sp.							1																				
Cochlodinium sp. 99	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1		
Dinophysioid sp.	3	4	1	3	2		1	2			1	1		2			1								1	1	
Gonyaulacoid sp.	1	3	2							1	2																
Gymnodinioid sp.	9	3	6	5	2		9	4	3	2	6	5	3	3	2	3	7	1	2	2	2	2	5	2	9	3	1
Gymnodinium galatheanum																											
Gyrodinium spirale-type	2	2		2	2		1			1	2	4	1	2			1	1		1	1		1				
Heterocapsa triquetra		1										1												1			
Noctiluca scintillans																											
Noctilucoid sp.																											
Oxyrrhis marina		1																									
Oxytoxum sp.	1	1	1	1			1		1				1														1
Polykrikos sp.																											
Prorocentrum gracile	1	1	1	1	1		1	1	1	1		1	1														
Prorocentrum micans	1	1					1			1			1				1		1				1		1		
Prorocentrum sp.																											
Protoperidinioid sp.	6	10	5	5	2		6	5	2	3	3	3	1				3	1		1	1				1		
Pyrocystis lunula																											
Raphidophytes																											
Heterosigma akashiwo		1		1			1					1								1							

Table 39 : Other flagellates, microzooplankton, dominant species, percent constituent, and total biomass in Thorpe Point samples.

date	Jun-23			Jun-30			Jul-07			Jul-14			Jul-21			Jul-28			Aug-04			Aug-11			Aug-18			Aug-25		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																														
Cryptomonads								1		1	1	1																		
Dictyocha speculum	1						1					1				1														
Dinobryon balticum																														
Ebria tripartita																														
Euglenoid		1											1	1					1									1		
Phaeocystis pouchetii																						1	1	1						
Radiolarian	1	1									1																			
unid. Nanoflagellates	5	3	2	4	3	4	2	3	3	2	3	3	6	4	3	7	4	3	4	2	5	3	3	4	8	3	3	6	4	5
Zooplankton																														
Appendicularian																														
Ciliate	4	3	2		3	3	3	4	4	3	2	5	6	5	3	5	6	6	3	6	1	3	4	5	4	5	4	6	3	1
Copepod																														
Nauplius																														
Pluteus																														
Rotifer										1		1											1		1			1		
Tintinnid	2	2									1	1	1			4		1		1	1									
Zoea																														
other										1																				
Dominant Species/Group																														
name	*Chaetoceros spp.*	mixed diatoms	mixed diatoms	*Chaetoceros spp.*	*Ch. spp. & Thalassiosira rotula*	none	mixed diatoms	*Chaetoceros spp.*	mixed diatoms	mixed diatoms	mixed diatoms	mixed diatoms	small dinoflagellates	mixed diatoms	mixed diatoms	dinoflagellates	ciliates	ciliates	*Pseudonitzschia sp.*	*Pseudonitzschia sp.*	mixed diatoms	*Chaetoceros spp.*	*Chaetoceros spp.*	*Chaetoceros spp.*	*Chaetoceros convolutus*	*Chaetoceros spp.*	*Chaetoceros spp.*	*Cochlodinium sp. 99*	dinoflagellates	dinoflagellates
count (cells/mL)	~200	~750	500	750	~500		2000	1000	1000	~1500	2700	3400	~100	~150	~150	~50	~15	~10	100	180	1000	2200	1700	1000	59	~300	~200	80	~150	~100
% constituent																														
Diatoms	60	75	87	93	92	35	83	83	88	88	88	88	20	40	40	10	5	5	70	70	80	83	79	83	83	83	79	20	40	44
Dinoflagellates	30	15	5	1	2	20	10	10	5	5	5	5	35	20	20	50	35	30	15	15	10	10	15	10	10	10	15	40	47	50
Raphidophytes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	5	2
Other Flagellates	5	5	5	5	5	35	5	2	2	2	2	2	15	10	15	10	15	15	5	1	5	2	1	2	2	2	1	2	3	2
Zooplankton	5	5	3	1	1	10	2	5	5	5	5	5	30	30	25	30	45	50	10	14	5	5	5	5	5	5	5	15	5	2
Biomass																			3.0	3.5	2.5	3.0	3.0	2.5	3.0	3.0	3.0	3.0	2.5	2.0

Table 39 cont'd

date	Sep-01			Sep-08			Sep-15			Sep-22			Sep-29			Oct-06			Oct-13			Oct-20			Oct-26		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																											
Cryptomonads																											
Dictyocha speculum																									1		
Dinobryon balticum																											
Ebria tripartita											1																
Euglenoid																											
Phaeocystis pouchetii																											
Radiolarian																											
unid. Nanoflagellates	3	3	3	4	3		4	3	3	3	3	4	4	3	3	2	3	2	5	4	3	3	4	3	6	4	4
Zooplankton																											
Appendicularian							1				1																
Ciliate	4	5	5	6	6		5	1	3	2	5	3	4	2	3	2	3	2	2	1	3	4	4	3	6	2	2
Copepod																	1										
Nauplius			1		1					1							1										
Pluteus																											
Rotifer																	1										
Tintinnid	1		1																						3		
Zoea																											
other																											
Dominant Species/Group																											
name	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	no sample	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	dinoflagellates	*Cochlodinium sp. 99*	dinoflagellates	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	dinoflagellates	dinoflagellates	*Dictyocha speculum*	nanoflagellates	nanoflagellates
count (cells/mL)	1500	1000	800	500	500		100	390	300	520	400	170	100	65	90	~30	260	~12	30	15	10	6	~10	~6	50	~100	~100
% constituent																											
Diatoms	0	0	1	1	1	1	10	10	5	20	20	20	2	1	1	15	5	10	20	5	0	0	0	10	1	0	0
Dinoflagellates	90	90	90	95	93	93	80	87	85	55	50	50	90	95	95	65	80	69	60	75	70	55	45	45	33	30	10
Raphidophytes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Flagellates	1	1	1	1	1	1	2	1	2	20	25	25	1	1	1	5	1	1	5	5	5	10	20	15	33	50	70
Zooplankton	9	9	8	3	5	5	8	2	8	5	2	2	7	3	3	15	14	20	15	15	25	35	35	30	33	20	20
Biomass	4.0	4.0	3.5	3.0	3.0	3.0	3.0	3.5	3.5	3.5	3.5	3.0	3.0	2.0	2.0	1.5	3.0	1.5	2.0	2.0	1.5	1.5	1.5	1.0	3.0	1.0	1.0

Table 40 : Diatoms in Coal Harbour samples.

date	Jun-23			Jun-30			Jul-07			Jul-14			Jul-21			Jul-28			Aug-04			Aug-11			Aug-18			Aug-25		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																														
Achnanthes sp.																														
Amphiproral Tropidoneis																														
Asterionella japonica																														
Bacteriastrum sp.																														
Biddulphia sp.																														
Campylosira/Plagiogramma																														
Cerautalina sp.																											1			
Chaetoceros concavicorne																														
Chaetoceros convolutus									1	1	1	1		1	1					1	1	1	1	1	1	1	1	1		
Chaetoceros sp.	5	4	3	4	5	2	4	5	4	5	5	5	1	2	4	2			4	5	3	7	7	7	6	6	6	2	2	1
Corethron hystrix																														
Coscinodiscus sp.														1						2	1					1	1	1		
Dactylisolen sp.	1			1	1		1	1	1																					
Ditylum brightwellii	1	1		1	1	1	1	1	1	1	1	1	1		1						1	1								
Eucampia zoodiacus																									1		1			
Grammatophora sp.																														
Hemialus sp.																														
Lauderia annulata	1	1																												
Leptocylindrus danicus										1	1	1	1	1	1	1						1			1				1	1
Leptocylindrus minimus																									1					
Licmophora sp.								1																						
Melosira sp.																														
Navicula sp.	1	1		1	1			1	2	1	1	1										1			1	1	1			
Nitzschioid sp.	1			1	1	1	1	2	1	2	3	2		2	2	1			5	4	3	3	3	2	2	2	1			
Pleurosigma/ Gyrosigma sp.									1		1	1											1	1						
Rhizosolenia setigera		1							1		1	1												1	1	1	1			
Rhizosolenia sp.																														
Rhizosolenia stolterfothii												1																		
Skeletonema costatum	1	1	1	1	1	1	1	1	1	1	1	1		1	1				1	1	1	1	1	1		1	1	1	1	
Stephanopyxis sp.																														
Thalassionema sp.	1				1		1		1			1			1					1			1	1	1		1			
Thalassiosira sp.	1	2	2	1	1	2	2	3	1	1	1	1	1	2	1	1	1	2	2	3	2	2	2	2	3	2	2			1

Table 40 cont'd

date	Sep-01			Sep-08			Sep-15			Sep-22			Sep-29			Oct-06			Oct-13			Oct-20			Oct-26		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																											
Achnanthes sp.				1																							
Amphiproral Tropidoneis																											
Asterionella japonica																											
Bacteriastrum sp.																											
Biddulphia sp.																											
Campylosira/Plagiogramma																											
Cerautalina sp.																1											
Chaetoceros concavicorne																											
Chaetoceros convolutus																											
Chaetoceros sp.				1			1			2	2	1				1											
Corethron hystrix																											
Coscinodiscus sp.		1	1																								
Dactyliosolen sp.																											
Ditylum brightwellii																											
Eucampia zoodiacus																											
Grammatophora sp.																											
Hemialus sp.																											
Lauderia annulata																											
Leptocylindrus danicus										1																	
Leptocylindrus minimus										1												1					
Licmophora sp.																											
Melosira sp.																											
Navicula sp.																			1		1						
Nitzschioid sp.										1	1							1		2							
Pleurosigma/ Gyrosigma sp.				1																							
Rhizosolenia setigera																											
Rhizosolenia sp.										1			1				1										
Rhizosolenia stolterfothii																											
Skeletonema costatum				1				1	1	1	1	1	1	1		1		1									
Stephanopyxis sp.																											
Thalassionema sp.																											
Thalassiosira sp.								1					2	1			1					1	1				

Table 41 : Dinoflagellates in Coal Harbour samples.

date	Jun-23			Jun-30			Jul-07			Jul-14			Jul-21			Jul-28			Aug-04			Aug-11			Aug-18			Aug-25		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																														
Alexandrium sp.																			2	1	1									
Amphidinium sp.																														
Ceratium divericatum																														
Ceratium furca																														
Ceratium fusus																														
Ceratium lineatum																													1	1
Ceratium pentagonum																														
Cochlodinium sp.																									1			1	1	1
Dinophysioid sp.	1								1			1	2			3		1					1	1	2		1	2	2	2
Gonyaulacoid sp.		1	1							1		1		1	1	2													1	1
Gymnodinioid sp.	1			1	3	1	3	2	1			2	5	5	5	8	3	4	3	3	4	5	4	4	6	5	2	6	4	4
Gymnodinium galatheanum																														
Gyrodinium spirale-type								1		1	1		1	1	1	2	2	2	1	1	1	2	1	1	2	1	2	1	1	1
Heterocapsa triquetra												1	1		1	1	1	1	1	1					1					
Noctiluca scintillans																														
Noctilucoid sp.																														
Oxyrrhis marina			1					1																				1		1
Oxytoxum sp.					1									1														1	1	1
Polykrikos sp.																1	1						1		1	1		1		
Prorocentrum gracile																		1				1	1		1	1	1	1	1	1
Prorocentrum micans																												1		
Prorocentrum sp.																									1	1				
Protoperidinioid sp.		1	1	3	2	2	5	3	3	5	5	4	5	4	2	6	6	6	3	6	6	4	6	4	5	5	3	5	6	2
Pyrocystis lunula			1								1																			
Raphidophytes																														
Heterosigma akashiwo													1	1	1							1			1			1	1	1

Table 41 cont'd

date	Sep-01			Sep-08			Sep-15			Sep-22			Sep-29			Oct-06			Oct-13			Oct-20			Oct-26		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																											
Alexandrium sp.									1				1														
Amphidinium sp.																											
Ceratium divericatum																											
Ceratium furca																											
Ceratium fusus																											
Ceratium lineatum	1	1	1	1	1	1	1	1		1					1					1		1					
Ceratium pentagonum																											
Ceratium sp.																											
Cochlodinium sp.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Dinophysioid sp.	4	3	2	2	1	1	1	1	1	2		1				1	1					2		1			
Gonyaulacoid sp.	1	1								1																	
Gymnodinioid sp.	7	5	7	8	3	2	5	3	3	6	4	2	3	3	2	2	3	3	7	4	1	6	1	2	2	2	4
Gymnodinium galatheanum																											
Gyrodinium spirale-type	2	2	1	3			1		1	2	2	1	2	1	1		2	1	1	1	1	2		1			1
Heterocapsa triquetra	1		1											1													
Noctiluca scintillans																											
Noctilucoid sp.																											
Oxymitis marina	1	1	1																							1	
Oxytoxum sp.	1	1	1	1	1		1		1	1		1	1				1	1									
Polykrikos sp.	1															1											
Prorocentrum gracile	1	1	1	1	1	1	1		1				1		1												
Prorocentrum micans	1		1	1	1		1			1		1	1	1	1					1							
Prorocentrum sp.																											
Protoperidinioid sp.	7	6	1	6	4	3	2			3	1	1	3		2		1	1	2		1			1	1		
Pyrocystis lunula										1																	
Raphidophytes																											
Heterosigma akashiwo			1	1			1						1						1								

Table 42 : Other flagellates, microzooplankton [illegible]nt species, percent constituent, and total biomass in Coal Harbour samples.

date	Jun-23			[illegible]			Jul-07			Jul-14			Jul-21			Jul-28			Aug-04			Aug-11			Aug-18			Aug-25		
depth	1m	5m	10m	[illegible]	[illegible]	[illegible]um	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																														
Cryptomonads								1		1																				
Dictyocha speculum													1																	
Dinobryon balticum																														
Ebria tripartita	1		1											1								1	1							
Euglenoid							1	1		1												1			1				1	
Phaeocystis pouchetii																														
Radiolarian																														
unid. Nanoflagellates	3	3	3	4	4	3	2	2	2	3	3	2	5	5	4	4	3	3	6	7	4	7	5	5	6	3	6	3	3	3
Zooplankton																														
Appendicularian																														
Ciliate	2	1	2	1	2	1	1	3		2	2	4	6	7	7	8	7	6	2	7	6	3	6	5	4	5	3	5	4	4
Copepod		1																												
Nauplius																														
Pluteus																														
Rotifer			1												1	1	1	1				1	1						2	
Tintinnid						1	1				1		3	1	3	4												2	2	
Zoea																														
other																														
Dominant Species/Group																														
name	mixed diatoms	mixed diatoms	mixed diatoms	*Chaetoceros spp.*	*Chaetoceros spp.*	*Thalassiosira rotula*	*Chaetoceros spp.*	*Chaetoceros spp.*	*Chaetoceros spp.*	diatoms	*Chaetoceros spp.*	*Chaetoceros spp.*	sm. dinoflagellates	*Leptocylindrus danicus*	diatoms	dinoflagellates	dinoflagellates	dinoflagellates	*Pseudontzschia sp.*	*Pseudontzschia sp.*	*Pseudontzschia sp.*	*Chaetoceros spp.*	*Chaetoceros convolutus*	*Chaetoceros convolutus*	*Chaetoceros convolutus*	*Chaetoceros spp.*	*Chaetoceros spp.*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*
count (cells/ml.)	1100	500	150	700	600	200	1300	2500	1600	3800	3200	4300	180	100	940	200	50	40	230	450	130	3000	54	51	37	850	200	2700	520	400
% constituent																														
Diatoms	94	97	97	80	50	75	80	80	90	91	88	91	20	45	52	10	10	15	50	60	50	72	70	72	65	65	60	4	4	4
Dinoflagellates	1	1	1	5	5	2	17	17	5	5	5	2	35	22	18	50	45	45	35	20	20	20	17	15	20	20	25	70	65	65
Raphidophytes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	20	25	25
Other Flagellates	4	1	1	10	40	20	2	2	3	2	2	2	15	8	5	5	5	5	10	5	2	3	3	3	2	2	2	1	1	1
Zooplankton	1	1	1	5	5	3	1	1	2	2	5	5	30	25	25	35	40	35	5	15	25	5	10	10	12	13	13	5	5	5
Biomass																			2.5	3.5	2.5	3.0	3.0	3.0	3.0	3.5	2.5	4.0	3.5	3.5

Table 42 cont'd

date	Sep-01			Sep-08			Sep-15			Sep-22			Sep-29			Oct-06			Oct-13			Oct-20			Oct-26		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																											
Cryptomonads																											
Dictyocha speculum																									1	1	1
Oxyrrhis marina																											
Ebria tripartita																											
Euglenoid													1														
Phaeocystis pouchetii																											
Radiolarian																											
Unid. Nanoflagellates	2	2	3	2	2	2	5	3	3	4	4	4	4	3	4	4	3	3	4	4	3	5	5	5	5	2	3
Zooplankton																											
Appendicularian							1		1																		
Ciliate	4	5	4	2	1	2	4		2	4	6	4	5	1	5	3	6	5	9	4	3	4	4	1	5	3	2
Copepod																											
Nauplius																				1		1					
Polyps																											
Rotifer													1														
Tintinnid	1													1		1											
Tuna																											
Other																											
Dominant Species/Group																											
name	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Unflagellates	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Cochlodinium sp. 99	Dictyocha speculum	ciliates	Unflagellates
count (cells/mL)	2500	810	540	8000	6600	7000	1000	500	300	800	600	720	1750	98	300	1120	210	280	150	52	32	15	15	0	10	0	0
% cells/liquid																											
Diatoms	0	1	1	2	0	0	1	2	1	10	10	10	5	5	0	5	5	10	2	10	10	1	1	0	0	0	0
Unflagellates	96	96	96	97	99	99	93	92	93	80	75	80	85	90	90	90	80	80	77	60	45	75	70	75	20	30	40
Raphidophytes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Flagellates	1	1	1	0	1	1	1	1	1	2	2	1	1	1	1	1	1	1	3	5	20	4	9	15	5	30	30
Zooplankton	3	3	3	1	1	1	5	5	5	8	13	9	9	4	9	4	14	9	20	25	25	20	20	10	30	40	30
Biomass	4.0	3.5	3.5	4.5	4.5	4.5	4.0	3.5	3.5	3.5	3.5	3.5	3.5	2.5	3.0	3.5	3.0	3.0	3.0	2.0	1.5	2.0	1.5	1.5	2.0	1.0	1.5

Table 43 : Diatoms in Koprino Harbour samples.

date	06-Jul			13-Jul			20-Jul			27-Jul			03-Aug			10-Aug			17-Aug			24-Aug			31-Aug			07-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																														
Achnanthes sp.																														
Amphiproral Tropidoneis																														
Asterionella japonica																		1								1				
Bacteriastrum sp.																							1							
Biddulphia sp.																														
Campylosira/Plagiogramma																														
Cerautalina sp.																														
Chaetoceros concavicorne									1							1		1												
Chaetoceros convolutus																														
Chaetoceros sp.		2	1		1		1	2	2		2	2	1	3		6	5	4	4	3	4		2	1						
Corethron hystrix																														
Coscinodiscus sp.		1		1	1	1										1														
Dactylisolen sp.																	1			1										
Ditylum brightwellii		1					1		1						1		1	1	1	1	1									
Eucampia zoodiacus														1	1	1	1	1												
Grammatophora sp.																														
Hemialus sp.																														
Lauderia annulata			1																											
Leptocylindrus danicus				1	1		1	1	1					1	1	1	1	1	1	1	1									
Leptocylindrus minimus																1		1						1	1	1	1	1		1
Licmophora sp.					1																									
Melosira sp.												1																		
Navicula sp.																														
Nitzschioid sp.	1						1	1	2	2	3		2	1	1	3	3	3		2	3		2							
Pleurosigma/ Gyrosigma sp.											1		1		1			1												
Rhizosolenia setigera																														
Rhizosolenia sp.										1			1			1		1												
Rhizosolenia stolterfothii																														
Skeletonema costatum	1		1				1	1	1			1			1		1			1	1								
Stephanopyxis sp.																				1										
Thalassionema sp.										1	1		1	1	1	1	1	1		1	1	1				1				
Thalassiosira sp.	2	2	1		1	1	1	1	2	3	1	1	1	1	1	2	4	2	3	3	2		1						1	2

Table 43 cont'd

date	14-Sep			21-Sep			28-Sep			05-Oct			12-Oct			19-Oct			26-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																					
Achnanthes sp.																					
Amphiproral Tropidoneis																					
Asterionella japonica																					
Bacteriastrum sp.													1								
Biddulphia sp.							1														
Campylosira/Plagiogramma																					
Cerautalina sp.																					
Chaetoceros concavicorne																					
Chaetoceros convolutus																					
Chaetoceros sp.		1		4	2	4	3	4	3	1		4	2	2	2						
Corethron hystrix																					
Coscinodiscus sp.	1						1	1													
Dactylisolen sp.								1													
Ditylum brightwellii																					
Eucampia zoodiacus																					
Grammatophora sp.																					
Hemialus sp.																					
Lauderia annulata					1		1					1	1								
Leptocylindrus danicus							1	1	1				1								
Leptocylindrus minimus																					
Licmophora sp.																					
Melosira sp.															1						1
Navicula sp.				3	1		1	2	1	1	1	1	1	1	2						
Nitzschioid sp.																					
Pleurosigma/ Gyrosigma sp.							1	1	1			1	1	1							
Rhizosolenia setigera				1	1			1	1				1								
Rhizosolenia sp.																					
Rhizosolenia stolterfothii																					
Skeletonema costatum		1	1	1	1	1		1	1												
Stephanopyxis sp.																					
Thalassionema sp.				1			1	1				1		1							
Thalassiosira sp.				1	1		3	2	2			1	1	1	1					1	

Table 44 : Dinoflagellates in Koprino Harbour samples.

date	06-Jul			13-Jul			20-Jul			27-Jul			03-Aug			10-Aug			17-Aug			24-Aug			31-Aug			07-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																														
Alexandrium sp.																1														
Amphidinium sp.																														
Ceratium divericatum																														
Ceratium furca																														
Ceratium fusus																														
Ceratium lineatum	1										1						1		1	1	1	1	1	1	1			1	1	
Ceratium pentagonum															1															
Ceratium sp.																														
Cochlodinium sp.																														
Cochlodinium sp. 99																1	1		1	1	1	1	1	1	1	1	1	1	1	1
Dinophysioid sp.												1							4	1		3			1			3		
Gonyaulacoid sp.										1	1			1		1			1	1										
Gymnodinioid sp.	3			3	1	3	4	3	1	8	6	5	7	3	3	8	10	4	7	7	5	10	5	4	5	5	6	9	6	5
Gymnodinium galatheanum																														
Gyrodinium spirale-type		1		1				1		3	2	3	1			3	1		1	3	2		2		1	3	2	2	1	
Heterocapsa triquetra				1	1		1			1	1		1	1			1		1		1	1	1					1		
Noctiluca scintillans																														
Noctilucoid sp.																														
Oxyrrhis marina						1			1	1			1		1	1	1						1	1	1	1	1			
Oxytoxum sp.							1			1		1				1				1		1	1	1	1			1		
Polykrikos sp.								1					1			1			1											
Prorocentrum gracile																1	1		1	1	1	1	1	1	1			1		
Prorocentrum micans																						1			1			1		1
Prorocentrum minimum																												1		
Prorocentrum sp.																														
Protoperidinioid sp.	3	3	1	3	2	5	6		2	6	6	6	9	7	2	10	9	2	6	2	5	5	6	5	2	4	1	2	1	1
Pyrocystis lunula																														
Raphidophytes																														
Heterosigma akashiwo										1	1		1	1		1	1		1	1	1	1			1	1		1		

Table 44 cont'd

date	14-Sep			21-Sep			28-Sep			05-Oct			12-Oct			19-Oct			26-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																					
Alexandrium sp.							1														
Amphidinium sp.																					
Ceratium divericatum																					
Ceratium furca																					
Ceratium fusus			1																		
Ceratium lineatum	1		1	1			1	1				1	1		1				1	1	1
Ceratium pentagonum																					
Ceratium sp.																					
Cochlodinium sp.																					1
Cochlodinium sp. 99	1	1	1	1	1	1	1	1	1	1	1	1	1	1				1	1		
Dinophysioid sp.	3	1	1	2	1				1												
Gonyaulacoid sp.				1																	
Gymnodinioid sp.	9	1	3	7	3	4	6	5	5	2	3	3	7	4	2	3	1	2	2		1
Gymnodinium galatheanum																					
Gyrodinium spirale-type	3	2	2	4	1		3	2	1	2	4	1	2	1	1	1					
Heterocapsa triquetra	1						1														
Noctiluca scintillans																					
Noctilucoid sp.																					
Oxyrrhis marina	1																				
Oxytoxum sp.	1	1	1	1				1	1												
Polykrikos sp.										1											
Prorocentrum gracile	1	1	1	1			1														
Prorocentrum micans	1	1	1					1		1	1	1	1	1	1	1			1	1	
Prorocentrum minimum																					
Prorocentrum sp.																					
Protoperidinioid sp.	9	1	1	3			5	4	1	1		1	3	1	2						
Pyrocystis lunula																					
Raphidophytes																					
Heterosigma akashiwo	1	1		1			1		1	1		1									

Table 45 : Other flagellates, microzooplankton, dominant species, percent constituent, and total biomass in Koprino Harbour samples.

date	06-Jul			13-Jul			20-Jul			27-Jul			03-Aug			10-Aug			17-Aug			24-Aug			31-Aug			07-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																														
Cryptomonads	1	1	1		1		1										1													
Dictyocha speculum						1						1													1					
Dinobryon balticum																														
Ebria tripartita										1	1	1		1			1					1								
Euglenoid					1	1				1	1		1		1				1									1		
Phaeocystis pouchetii																		1												
Radiolarian																							1							
unid. Nanoflagellates	3	3	4	5	6	4	5	4	3	6	5	5	4	7	4	6	5	3	4	3	4	5	3	4	2	2	3	4	4	4
Zooplankton																														
Appendicularian													1																	
Ciliate	4	5	3	6	5	7	6	3	4	10	9	4	10	5	3	9	10	1	7	6	6	6	5	3	3	5	4	4	3	5
Copepod																														
Nauplius																1				1			1							
Pluteus																														
Rotifer				1		1										1								1	1					
Tintinnid					1		1	1		3	3		1			2			1	2	1							1		
Zoea																														
other																														
Dominant Species/Group																														
name	*Thalassiosira sp.*	diatoms	nothing dominant	*Coscinodiscus sp.*	*Coscinodiscus sp.*	*Coscinodiscus sp.*	ciliates	diatoms	diatoms	ciliates and tintinnids	ciliates and tintinnids	dinoflagellates	sm. dinoflagellates	*Pseudontzschia sp.*	*Pseudontzschia sp.*	*Heterosigma akashiwo*	diatoms	diatoms	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*
count (cells/mL)	~100	~100		9	9	6	~50	~50	~100	140	170	100	400	100	~20	400	2500	2000	310	85	150	7000	150	130	240	390	580	3800	620	340
% constituent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Diatoms	70	75	30	40	40	37	25	30	55	30	28	10	20	60	55	25	42	66	30	40	30	1	5	5	2	5	2	1	1	5
Dinoflagellates	15	10	10	20	20	20	25	25	15	30	29	40	35	20	20	30	25	30	57	44	59	90	85	85	90	85	90	90	90	85
Raphidophytes	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	20	8	0	2	0	0	1	0	0	2	0	0	1	0	0
Other Flagellates	5	5	30	10	10	8	20	20	15	5	8	15	10	5	10	5	5	2	1	1	1	1	1	1	1	1	1	2	2	1
Zooplankton	10	10	30	30	30	35	30	25	15	35	35	35	30	15	15	20	20	2	10	15	10	7	9	9	5	9	7	6	7	9
Biomass										3.5	3.5	2.5	3.0	2.5	2.0	3.5	3.5	2.5	3.0	2.5	3.0	4.5	3.0	2.5	3.5	3.5	3.5	4.5	3.0	3.0

Table 45 cont'd

date	14-Sep			21-Sep			28-Sep			05-Oct			12-Oct			19-Oct			26-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																					
Cryptomonads																					
Dictyocha speculum		1					1				1								1		1
Dinobryon balticum																					
Ebria tripartita																					
Euglenoid	1	1	1																		
Phaeocystis pouchetii																					
Radiolarian														1							
unid. Nanoflagellates	5	4	5	6	4	2	3	4	4	4	5	4	5	5	4	3	4	3	3	4	5
Zooplankton																					
Appendicularian			1		1																
Ciliate	6	3	2	5	4	1	7	4	2	4	6	5	7	3	1	4	3	1	1	2	3
Copepod																					
Nauplius																					
Pluteus																					
Rotifer													1	1							
Tintinnid				1	2		2	1													
Zoea																					
other																					
Dominant Species/Group																					
name	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	dinoflagellates	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	dinoflagellates	*Pseudonitzschia sp.*	*Pseudonitzschia sp.*	dinoflagellates	ciliates	dinoflagellates	*Ceratium lineatum*	*Ceratium lineatum*	*Ceratium lineatum*
count (cells/mL)	790	830	710	300	100	50	100	~150	35	85	80	120	240	1600	1500	~10	~6	~5	5	3	4
% constituent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Diatoms	1	1	1	35	30	40	20	30	35	5	2	15	38	65	75	0	0	0	0	5	5
Dinoflagellates	90	95	95	45	45	50	65	55	55	78	75	68	42	20	20	50	10	50	85	70	55
Raphidophytes	4	1	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Other Flagellates	2	1	1	5	2	2	2	2	2	2	3	2	3	2	1	10	30	40	10	10	15
Zooplankton	3	2	3	14	23	8	12	13	7	15	20	15	17	13	4	40	60	10	5	15	25
Biomass	4.0	3.5	3.5	3.5	2.5	2.5	3.0	2.5	2.5	3.0	3.0	3.0	3.5	3.0	2.0	1.5	1.0	1.0	1.5	1.5	1.5

Table 46 : Diatoms in Koskimo Bay samples.

date	06-Jul			13-Jul			20-Jul			27-Jul			03-Aug			10-Aug			17-Aug			24-Aug			31-Aug			07-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																														
Achnanthes sp.																														
Amphiproral Tropidoneis																														
Asterionella japonica																														
Bacteriastrum sp.																	1			1										
Biddulphia sp.																														
Campylosira/Plagiogramma																1	1	1			1									
Cerautalina sp.													1																	
Chaetoceros concavicorne																														
Chaetoceros convolutus											1							1												
Chaetoceros sp.	2	2	1		1	1	3	3	2	2	4	5	4	6	3	6	6	5	5	4	5	1		1						
Corethron hystrix																														
Coscinodiscus sp.	1	1		1	1	1					1					1	1													
Dactylisolen sp.			1											1		1	1	1	1		1									
Ditylum brightwellii	1		1		1	1			1			1	1			1	1	1	1	1	1	1	1							
Eucampia zoodiacus											1	1	1	1	1	1	1	1	1											
Grammatophora sp.																														
Hemialus sp.																														
Lauderia annulata																														
Leptocylindrus danicus							1		1		1	1	1	1	1	1	1	1	1		1							1		
Leptocylindrus minimus																	1		1	1	1			1	1	1	1	1		1
Licmophora sp.																														
Melosira sp.																												1		
Navicula sp.																	1	1												
Nitzschioid sp.	1	1	1				1	2	1	2	1	3	1	2	1	2	2	1	2	2	2							1	1	1
Pleurosigma/ Gyrosigma sp.		1	1				1	1			1		1	1			1							1						
Rhizosolenia setigera																	1													
Rhizosolenia sp.													1	1	1		1	1			1									
Rhizosolenia stolterfothii																														
Skeletonema costatum	1	1					1	1	1		1	1	1	1		1				1	1			1						
Stephanopyxis sp.																	1	1			1									
Thalassioneme sp.			1							1	1	1	1	1		1	1	1	1	1	1		1	1						
Thalassiosira sp.	2	3	3		1	2	1	2	1	1	2	1	2	2	1	3	2	2	3	2	3			1			1	1	1	1

Table 46 cont'd

date	14-Sep			21-Sep			28-Sep			05-Oct			12-Oct			19-Oct			26-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																					
Achnanthes sp.																					
Amphiproral Tropidoneis																					
Asterionella japonica																					
Bacteriastrum sp.																					
Biddulphia sp.																					
Campylosiral Plagiogramma																					
Cerautalina sp.																					
Chaetoceros concavicorne																					
Chaetoceros convolutus																					
Chaetoceros sp.	1			1			4	2	3		1	1	1	2	1						
Corethron hystrix																					
Coscinodiscus sp.																					
Dactylisolen sp.															1						
Ditylum brightwellii								1													
Eucampia zoodiacus																					
Grammatophora sp.																					
Hemialus sp.																					
Lauderia annulata																					
Leptocylindrus danicus				1				1			1	1	1	1							
Leptocylindrus minimus								1	1												
Licmophora sp.																					
Melosira sp.																					
Navicula sp.															1						
Nitzschioid sp.				2	1	1	1	1	2			2	1	2	1						2
Pleurosigma/ Gyrosigma sp.																					
Rhizosolenia setigera							1	1	1			1									
Rhizosolenia sp.							1	1			1		1								
Rhizosolenia stolterfothii																					
Skeletonema costatum			1	1	1	1		1	1			1									
Stephanopyxis sp.												1									
Thalassionema sp.				1				1	1			1	1		1						
Thalassiosira sp.				1	1		2	3	3	1	1	1	1	2	1					1	1

Table 47 : Dinoflagellates in Koskimo Bay samples.

date	06-Jul			13-Jul			20-Jul			27-Jul			03-Aug			10-Aug			17-Aug			24-Aug			31-Aug			07-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																														
Alexandrium sp.																														
Amphidinium sp.																							1							
Ceratium divericatum																														
Ceratium furca																														
Ceratium fusus																														
Ceratium lineatum																	1	1	1	1	1	1	1	1	1	1		1	1	
Ceratium pentagonum													1											1						
Ceratium sp.																														
Cochlodinium sp.																							1							
Cochlodinium sp. 99																			1	1	1	1	1	1	1	1	1	1	1	1
Dinophysioid sp.	1															1	2		1	2	1	2	1	3	3	3		3		1
Gonyaulacoid sp.	2			1			1			1	1						2	1	1			1	1			1	1			
Gymnodinioid sp.	2	1		5	1	2	6	4	1	10	3	4	8	5	3	10	9	8	6	3	9	8	8	9	9	8	4	7	8	3
Gymnodinium galatheanum																														
Gyrodinium spirale-type	1	1		1			1	1		2	1	1				2	2		2		2	1	2		4	1	1			
Heterocapsa triquetra				1		1	1	1		1			1	1					1			1	1							
Noctiluca scintillans																														
Noctilucoid sp.																														
Oxyrrhis marina											1		1			1	1	1	1		1	1	1		1	1	1			
Oxytoxum sp.							1		1													1	1	1	1	1		1	1	
Polykrikos sp.										1	1					1			1			1								
Prorocentrum gracile	1												1	1		1	1		1	1	1	1	1	1	1	1		1		
Prorocentrum micans																			1			1		1				1		
Prorocentrum minimum																														
Prorocentrum sp.																														
Protoperidinioid sp.	4	2	2	4			6	2	1	8	3	5	7	2	1	8	9	5	7	6	2	8	7	5	4	2	1	7	2	1
Pyrocystis lunula																														
Raphidophytes																														
Heterosigma akashiwo										1			1			1	1	1	1		1		1		1	1	1	1	1	

Table 47 cont'd

date	14-Sep			21-Sep			28-Sep			05-Oct			12-Oct			19-Oct			26-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																					
Alexandrium sp.																					
Amphidinium sp.																					
Ceratium divericatum																					
Ceratium furca																					
Ceratium fusus																					
Ceratium lineatum	1			1			1	1					1	1					1	1	1
Ceratium pentagonum																					
Ceratium sp.																					
Cochlodinium sp.													1								
Cochlodinium sp. 99	1	1	1	1	1	1	1	1		1	1	1	1	1	1					1	
Dinophysioid sp.	2									1			1	1					1		
Gonyaulacoid sp.																					
Gymnodinioid sp.	5	5	2	9	4	3	6	6	3	2	4	1	7	7	2	1	2	1	2	3	2
Gymnodinium galatheanum																					
Gyrodinium spirale-type	1	1	1	1		2	3	2		2	2	2	3	1		1					
Heterocapsa triquetra	1			1																	
Noctiluca scintillans																					
Noctilucoid sp.																					
Oxyrrhis marina																					
Oxytoxum sp.	1			1			1						1								
Polykrikos sp.																					
Prorocentrum gracile	1	1		1								1	1								
Prorocentrum micans	1			1			1		1					1	1	1			1	1	1
Prorocentrum minimum																					
Prorocentrum sp.																					
Protoperidinioid sp.	5			1			3	2		1			4	2	1			1	1		
Pyrocystis lunula																					
Raphidophytes																					
Heterosigma akashiwo	1	1		1						1	1										

Table 48 : Other flagellates, microzooplankton, dominant species, percent constituent, and total biomass in Koskimo Bay samples.

date	06-Jul			13-Jul			20-Jul			27-Jul			03-Aug			10-Aug			17-Aug			24-Aug			31-Aug			07-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																														
Cryptomonads	1	1	1													1														
Dictyocha speculum										1									1		1							1	1	
Dinobryon balticum																														
Ebria tripartita										1						1	1	1												
Euglenoid	1			1									1	1	1								1		1				1	
Phaeocystis pouchetii							1																							
Radiolarian																	1	1		1										
unid. Nanoflagellates	4	2	3	5	5	4	6	5	5	6	6	4	4	5	2	6	8	4	5	4	7	3	4	4	5	2	3	6	3	2
Zooplankton																														
Appendicularian																														
Ciliate	4	2	3	8	2	2	8	6	2	7	2	3	6	5	4	8	9	5	7	4	4	7	6	4	4	8	2	10	5	3
Copepod																														
Nauplius						1																								
Pluteus																														
Rotifer				1									1									1	1			1				
Tintinnid							1			2			2			2			2	1	2	1	2		1			1		
Zoea																														
other																														
Dominant Species/Group																														
name	diatoms	diatoms	diatoms	*Coscinodiscus sp.*	*Coscinodiscus sp.*	*Coscinodiscus sp.*	dinoflagellates	ciliates	diatoms	dinoflagellates	*Chaetoceros debilis*	*Chaetoceros debilis*	*Pseudonitzschia sp.*	*Pseudonitzschia sp.*	*Pseudonitzschia sp.*	*Prorocentrum gracile*	diatoms	diatoms	*Cochlodinium sp. 99*	diatoms	diatoms	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*
count (cells/mL)	~100	~200	~200	e	e	e	~80	~40	~50	200	~200	~250	420	170	75	320	2500	1600	300	~300	~300	2000	880	260	1000	330	160	820	360	120
% constituent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Diatoms	35	60	65	33	65	70	25	25	50	20	78	83	55	60	65	35	48	50	40	54	62	1	2	5	1	2	3	5	1	5
Dinoflagellates	30	20	15	25	10	10	30	25	15	4[illegible]	15	10	25	20	15	40	30	35	43	40	30	90	90	80	90	85	90	80	85	85
Raphidophytes	0	0	0	0	0	0	0	0	0	[illegible]	0	0	0	0	0	8	5	1	1	0	1	0	0	0	1	0	1	1	0	0
Other Flagellates	10	10	10	10	10	10	20	20	20	10	5	5	5	5	5	2	2	1	1	1	2	1	1	1	1	1	1	1	2	1
Zooplankton	25	10	10	32	15	10	25	30	15	30	2	2	15	15	15	15	15	13	15	5	5	8	7	14	7	12	5	13	12	9
Biomass										3.0	3.0	3.0	3.0	3.0	2.5	3.0	2.5	2.5	3.0	2.5	2.5	4.0	3.5	3.0	4.0	3.5	3.0	3.5	3.0	2.5

Table 48 cont'd

date	14-Sep			21-Sep			28-Sep			05-Oct			12-Oct			19-Oct			26-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																					
Cryptomonads																					
Dictyocha speculum				1									1								
Dinobryon balticum																					
Ebria tripartita																					
Euglenoid	2	1		1																	
Phaeocystis pouchetii																					
Radiolarian																					
unid. Nanoflagellates	7	3	4	5	3	2	3	2	4	4	5	5	4	5	4	3	3	2	4	5	5
Zooplankton																					
Appendicularian																					
Ciliate	6	2	1	6	3	2	8	8	5	6	3	6	4	3	2	3			7	3	4
Copepod											1										
Nauplius																					
Pluteus																					
Rotifer							1														
Tintinnid				1			1						2								
Zoea																					
other																					
Dominant Species/Group																					
name	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	dinoflagellates	*Pseudontzschia sp.*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Cochlodinium sp. 99*	*Pseudontzschia sp.*	*Pseudontzschia sp.*	*Pseudontzschia sp.*	ciliates	dinoflagellates	dinoflagellates	*Prorocentrum micans*	*Ceratium lineatum*	*Ceratium lineatum*
count (cells/mL)	550	940	550	125	35	25	140	~100	650	50	30	30	3100	2000	540	~5	~3	~2	12	7	9
% constituent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Diatoms	1	0	1	30	10	10	35	35	45	1	15	20	50	70	65	0	0	0	0	10	10
Dinoflagellates	91	95	97	45	75	75	50	45	35	80	65	50	35	20	20	30	55	55	65	70	70
Raphidophytes	3	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Flagellates	2	2	1	5	5	5	1	1	2	2	5	10	2	2	4	30	45	45	5	5	10
Zooplankton	3	2	1	15	10	10	14	19	18	17	15	20	13	8	11	40	0	0	30	15	10
Biomass	3.5	3.5	3.0	3.0	2.5	2.0	3.0	2.5	2.0	2.5	2.0	2.5	3.0	2.5	2.0	1.0	1.0	1.0	1.5	1.5	1.5

Table 49 : Diatoms in Cleagh Creek samples.

date	1-Jul			8-Jul			15-Jul			22-Jul			29-Jul			5-Aug			12-Aug			19-Aug			26-Aug			2-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																														
Achnanthes sp.																														
Amphiprora/ Tropidoneis																			1	1										
Asterionella japonica																						1	1							
Bacteriastrum sp.														1																
Biddulphia sp.																														
Campylosira/Plagiogramma																														
Cerautalina sp.																														
Chaetoceros concavicorne																								1						
Chaetoceros convolutus										1	1																			
Chaetoceros sp.		1			1				2	2	3	1	1			1	3	2	1		2	4	5	4	1	1				
Corethron hystrix																														1
Coscinodiscus sp.					1	1		1	1												1									
Dactylisolen sp.		1	1																											
Ditylum brightwellii		1	1								1											1	1	1						
Eucampia zoodiacus																	1	1	1	1										
Grammatophora sp.																														
Hemialus sp.																			1											
Lauderia annulata																														
Leptocylindrus danicus					1	1		1	1	1	1	1				1		1	1	1	1			1						
Leptocylindrus minimus																														
Licmophora sp.																														
Melosira sp.																														
Navicula sp.																	1													
Nitzschioid sp.		1				1		1	1	2	1	2	1			2	1	1	1	1	1				1	1				
Pleurosigma/ Gyrosigma sp.													1			1	1	1												
Rhizosolenia setigera																														
Rhizosolenia sp.																														
Rhizosolenia stolterfothii																														
Skeletonema costatum									1	1	1	1				1														
Stephanopyxis sp.																														
Thalassionema sp.		1								1	1			1	1	1	1	1	1		1	1	1	1	1	1				
Thalassiosira sp.		3	2		2	2			1	2	1	2		1	2	2	2	1	2	2	2	1	1	1	1	1				

Table 49 cont'd

date	9-Sep			16-Sep			23-Sep			30-Sep			7-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms															
Achnanthes sp.															
Amphiprora/ Tropidoneis															
Asterionella japonica															
Bacteriastrum sp.															
Biddulphia sp.															
Campylosira/Plagiogramma															
Cerautalina sp.															
Chaetoceros concavicorne															
Chaetoceros convolutus															
Chaetoceros sp.				1	1	1	1	3	1			2		4	1
Corethron hystrix															
Coscinodiscus sp.					1	1									
Dactylisolen sp.															
Ditylum brightwellii															
Eucampia zoodiacus															
Grammatophora sp.															
Hemialus sp.															
Lauderia annulata															
Leptocylindrus danicus													1		1
Leptocylindrus minimus		1													
Licmophora sp.				1											
Melosira sp.															
Navicula sp.			1												
Nitzschioid sp.							1			1			1	1	1
Pleurosigma/ Gyrosigma sp.															
Rhizosolenia setigera													1	1	1
Rhizosolenia sp.				1				1	1		1		1	1	
Rhizosolenia stolterfothii															
Skeletonema costatum				1			1	1	1	1		1			
Stephanopyxis sp.															
Thalassionema sp.							1	1					1	1	
Thalassiosira sp.				1			1		1		1		2	1	1

Table 50 : Dinoflagellates in Cleagh Creek samples.

date	1-Jul			8-Jul			15-Jul			22-Jul			29-Jul			5-Aug			12-Aug			19-Aug			26-Aug			2-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																														
Alexandrium sp.																					1				1					
Amphidinium sp.																						1								
Ceratium divericatum																														
Ceratium furca																														
Ceratium fusus																														
Ceratium lineatum																						1	1	1	1	1		1	1	
Ceratium pentagonum																														
Ceratium sp.																														
Cochlodinium sp.																									1					
Dinophysioid sp.													1			1						2	1	1	2			4	2	1
Gonyaulacoid sp.		1	1						1				3	2	1	1			2					1					1	
Gymnodinioid sp.					4	3			2	5	1	4	7	6	2	4	3		10	4	2	5	6	4	4	6		1	4	3
Gymnodinium galatheanum																														
Gyrodinium spirale-type										1	1	1	1	1		1	1		1	2		3			1			3	3	2
Heterocapsa triquetra					1			1	1			1										1	1	1	1	1				
Noctiluca scintillans																														
Noctilucoid sp.																									1					
Oxyrrhis marina																												1		
Oxytoxum sp.		1								1												1	1	1	1	1		1	1	1
Polykrikos sp.																				1		1								
Prorocentrum gracile																1	1		1	1		1	1	1	1	1		1	1	1
Prorocentrum micans																								1				1		
Prorocentrum sp.																														
Protoperidinioid sp.		6	2		2	2		3	3	5	4	3	6	3	2	7	4	3	8	4	3	10	6	3	7	6		7	7	3
Pyrocystis lunula						1																								
Raphidophytes																														
Heterosigma akashiwo													1			1			1	1		1	1	1		1				

Table 50 cont'd

date	9-Sep			16-Sep			23-Sep			30-Sep			7-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates															
Alexandrium sp.												1			
Amphidinium sp.															
Ceratium divericatum															
Ceratium furca															
Ceratium fusus				1											
Ceratium lineatum	1	1	1	1	1	1	1				1	1			1
Ceratium pentagonum															
Ceratium sp.															
Cochlodinium sp.		1													
Dinophysioid sp.	2	1	2	1	2		1								
Gonyaulacoid sp.	1			2			1								
Gymnodinioid sp.	4	3	2	5	5	2	1		3	3	3	5	1	2	3
Gymnodinium galatheanum															
Gyrodinium spirale-type				2		1	2	3		1		1		1	
Heterocapsa triquetra				1											
Noctiluca scintillans															
Noctilucoid sp.															
Oxyrrhis marina															
Oxytoxum sp.	1			1		1	1	1	1			1			
Polykrikos sp.															
Prorocentrum gracile	1	1		1	1	1	1	1	1	1			1	1	
Prorocentrum micans	1	1		1	1	1	1	1		1	1	1		1	
Prorocentrum sp.															
Protoperidinioid sp.	2		2	1	1	1	2	1	1	4		1	4	1	
Pyrocystis lunula															
Raphidophytes															
Heterosigma akashiwo	1														

Table 51 : Other flagellates, microzooplankton, dominant species, percent constituent, and total biomass in Cleagh Creek samples.

date	1-Jul			8-Jul			15-Jul			22-Jul			29-Jul			5-Aug			12-Aug			19-Aug			26-Aug			2-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																														
Cryptomonads					1	1																								
Dictyocha speculum						1					1					1	1													
Dinobryon balticum																														
Ebria tripartita														1																
Euglenoid									1								1						1					1		
Phaeocystis pouchetii																														
Radiolarian																						1								
unid. Nanoflagellates		3	3		3	4		4	5	6	2	4	6	5	5	4	4	4	3	3	3	2	3	4	6	4		3	3	3
Zooplankton																														
Appendicularian																						1								
Ciliate		2	1		4	4		3	5	8	6	4	8	3	3	3	5	2	5	3	2	5	3	4	8	5		3	6	3
Copepod																														
Nauplius															1										2					
Pluteus																														
Rotifer					1										1		1		1					1	1	1				
Tintinnid																	1					1	1			1		1	1	
Zoea																														
other			1																											
Dominant Species/Group																														
name	no sample	unid. species	unid. species	no sample	*Coscinodiscus sp.*	*Coscinodiscus sp.*	no sample	*Coscinodiscus sp.*	*Coscinodiscus sp.*	ciliates	diatoms	diatoms	dinoflagellates	dinoflagellates	unid. species	*Pseudontzschia sp.*	*Pseudontzschia sp.*	*Pseudontzschia sp.*	dinoflagellates	dinoflagellates	diatoms	*Cochlodium sp. 99*	*Cochlodium sp. 99*	*Cochlodium sp. 99*	*Cochlodium sp. 99*	*Cochlodium sp. 99*	no sample	*Cochlodium sp. 99*	*Cochlodium sp. 99*	*Cochlodium sp. 99*
count (cells/mL)		100	200		5	12		15	10	~50	~150	~100	100	80	~50	80	~40	~30	~200	~80	~50	1000	265	290	900	1300		5500	930	~500
% constituent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Diatoms	30	30	20	50	50	70	75	75	80	30	40	40	15	30	10	68	63	63	20	30	50	5	8	10	5	5	5	0	0	1
Dinoflagellates	15	15	5	30	30	10	5	5	5	25	25	20	45	40	35	20	20	20	59	55	30	89	80	83	75	80	80	98	97	96
Raphidophytes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	0	1	1	0	0	0
Other Flagellates	5	5	5	10	10	10	5	5	5	10	5	10	10	10	10	2	2	2	5	4	10	1	1	1	5	2	2	1	1	1
Zooplankton	50	50	70	10	10	10	15	15	10	35	30	30	30	20	45	10	15	15	15	10	10	5	10	5	15	12	12	1	2	2
Biomass													2.5	2.0	2.0	3.0	2.5	2.0	3.0	2.0	1.5	4.0	3.5	3.0	3.5	4.0	3.0	4.5	3.5	3.0

Table 51 cont'd

date	9-Sep			16-Sep			23-Sep			30-Sep			7-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates															
Cryptomonads															
Dictyocha speculum	1	1						1						1	
Dinobryon balticum															
Ebria tripartita															
Euglenoid				1	1										
Phaeocystis pouchetii															
Radiolarian															
unid. Nanoflagellates	3	7	3	5	4	4	4	4	5	3	2	2	4	3	4
Zooplankton															
Appendicularian															
Ciliate	4	4	2	2	2	1	3	5	1	1	2	1	2	3	2
Copepod															
Nauplius											1			1	
Pluteus															
Rotifer															
Tintinnid				1	1					1		1			
Zoea															
other															
Dominant Species/Group															
name	*Cochlodium sp. 99*	*Cochlodium sp. 99*	*Cochlodium sp. 99*	*Cochlodium sp. 99*	*Cochlodium sp. 99*	*Cochlodium sp. 99*	*Cochlodium sp. 99*	*Cochlodium sp. 99*	*Cochlodium sp. 99*	*Cochlodium sp. 99*	*Cochlodium sp. 99*	*Cochlodium sp. 99*	*Cochlodium sp. 99*	*Cochlodium sp. 99*	*Cochlodium sp. 99*
count (cells/mL)	1900	600	370	800	530	300	185	110	85	380	200	300	40	70	40
% constituent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Diatoms	0	1	1	5	2	5	25	35	45	5	5	8	25	30	30
Dinoflagellates	93	90	94	90	93	90	67	45	45	92	90	88	65	60	60
Raphidophytes	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Flagellates	1	3	1	2	2	2	3	5	5	1	1	1	1	1	2
Zooplankton	5	6	4	3	3	3	5	15	5	2	4	3	9	9	8
Biomass	4.0	3.5	3.0	3.5	3.5	3.0	3.0	3.0	2.5	3.0	3.0	3.0	3.0	3.0	3.0

Table 52 : Diatoms in Kultus Cove samples.

date	01-Jul			08-Jul			15-Jul			22-Jul			29-Jul			05-Aug			12-Aug			19-Aug			26-Aug			09-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms																														
Achnanthes sp.																														
Amphiproral Tropidoneis																														
Asterionella japonica																														
Bacteriastrum sp.																								1						
Biddulphia sp.																						1								
Campylosira/Plagiogramma																														
Cerautalina sp.																														
Chaetoceros concavicorne																														
Chaetoceros convolutus		1								1	1													1						
Chaetoceros sp.		1	2		1				2	3	3	2				4	2	3	1	1	2			2	1					1
Corethron hystrix																														
Coscinodiscus sp.		1			1	1		1	1			1									1	1								
Dactylisolen sp.		1	1																											
Dityfum brightwellii		1	1			1			1	1		1											1	1						
Eucampia zoodiacus																			1	1										
Grammatophora sp.																														
Hemialus sp.																														
Lauderia annulata																														
Leptocylindrus danicus					1					1	1	1							1		1									
Leptocylindrus minimus																			1	1										
Licmophora sp.																														
Melosira sp.																														
Navicula sp.																				1	1			1				1		
Nitzschioid sp.		2			1			1	1	1	1	2	1			2	1	2	2	3	1	1								
Pleurosigma/ Gyrosigma sp.										1	1		1					1		1										
Rhizosolenia setigera			1																											
Rhizosolenia sp.																1				1										
Rhizosolenia stolterfothii																														
Skeletonema costatum		1	1					1	1	1	1	1					1		1		1									1
Stephanopyxis sp.																														
Thalassionema sp.		1								1		1	1		1	1	1	1	1	1	1		1	1	1	1			1	
Thalassiosira sp.		1	1					1	1	2	2	1	2	1	2	2	2	2	2	2	2			2					1	

Table 52 cont'd

date	16-Sep			23-Sep			07-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m
Diatoms									
Achnanthes sp.									
Amphiproral Tropidoneis									
Asterionella japonica									
Bacteriastrum sp.				1					
Biddulphia sp.									
Campylosiral Plagiogramma									
Cerautalina sp.									
Chaetoceros concavicorne									
Chaetoceros convolutus									
Chaetoceros sp.				3	3	5			
Corethron hystrix									
Coscinodiscus sp.									
Dactylisolen sp.									
Ditylum brightwellii									
Eucampia zoodiacus									
Grammatophora sp.									
Hemialus sp.									
Lauderia annulata					1				
Leptocylindrus danicus									
Leptocylindrus minimus									
Licmophora sp.				1					
Melosira sp.							1		
Navicula sp.		1							
Nitzschioid sp.				2	2	2	1		
Pleurosigmal Gyrosigma sp.									
Rhizosolenia setigera									1
Rhizosolenia sp.				1		1			
Rhizosolenia stolterfothii									
Skeletonema costatum	1	1	1	1	1	1	1		
Stephanopyxis sp.									
Thalassionema sp.				1	1	1			
Thalassiosira sp.				1		1			

Table 53 : Dinoflagellates in Kultus Cove samples.

date	01-Jul			08-Jul			15-Jul			22-Jul			29-Jul			05-Aug			12-Aug			19-Aug			26-Aug			09-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates																														
Alexandrium sp.																	1	1		1										
Amphidinium sp.																			1		1									
Ceratium divericatum																														
Ceratium furca																														
Ceratium fusus																														
Ceratium lineatum																						1	1	1	1	1	1	1	1	1
Ceratium pentagonum																														
Ceratium sp.																														
Cochlodinium sp.																											1			1
Cochlodinium sp. 99																			1	1	1	1	1	1	1	1	1	1	1	1
Dinophysioid sp.		1								1			2		1	1			3	1	1	3	1	1	3	3	2	3	1	2
Gonyaulacoid sp.					1			1	2		1	1	2	1			1											1		
Gymnodinioid sp.		1			3	2		2	1	5	2	3	7	5	6	6	7	3	9	7	7	4	7	4	8	6	9	8	6	9
Gymnodinium galatheanum																														
Gyrodinium spirale-type		1			1			1	1				1	1	1		2		1	2	2	1	2	1	1	3	1	1	3	1
Heterocapsa triquetra								1	1	1	1		1	1					1	1					1					
Noctiluca scintillans																														
Noctilucoid sp.																														
Oxymrhis marina		1																												
Oxytoxum sp.										1						1			1	1	1	1			1	1	1	1	1	
Polykrikos sp.											1								1	1		1			1					
Prorocentrum gracile									1						1	1			1	1	1	1	1	1	1	1	1	1	1	1
Prorocentrum micans																									1		1	1	1	1
Prorocentrum minimum																							1							
Prorocentrum sp.																														
Protoperidinioid sp.		4	2			5		6	3	8	7	3	6	5	4	4	6	4	6	6	4	8	2	4	8	4	4	6	2	3
Pyrocystis lunula														1																
Raphidophytes																														
Heterosigma akashiwo										1	1					1	1		1	1		1	1	1	1	1	1		1	

Table 53 cont'd

date	16-Sep			23-Sep			07-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m
Dinoflagellates									
Alexandrium sp.									
Amphidinium sp.		1							
Ceratium divericatum									
Ceratium furca									
Ceratium fusus									
Ceratium lineatum	1	1							
Ceratium pentagonum									
Ceratium sp.									
Cochlodinium sp.									
Cochlodinium sp. 99	1	1	1	1	1	1	1	1	1
Dinophysioid sp.	3								1
Gonyaulacoid sp.	1								
Gymnodinioid sp.	4	4	3	4	2	2		1	
Gymnodinium galatheanum									
Gyrodinium spirale-type	1							2	
Heterocapsa triquetra	1								
Noctiluca scintillans									
Noctilucoid sp.									
Oxymhis marina									
Oxytoxum sp.	1	1		1					
Polykrikos sp.									
Prorocentrum gracile	1	1	1	1	1	1			
Prorocentrum micans	1	1				1	1		
Prorocentrum minimum									
Prorocentrum sp.									
Protoperidinioid sp.	2			2					
Pyrocystis lunula									
Raphidophytes									
Heterosigma akashiwo						1			

Table 54 : Other flagellates, microzooplankton, dominant species, percent constituent, and total biomass in Kultus Cove samples.

date	01-Jul			08-Jul			15-Jul			22-Jul			29-Jul			05-Aug			12-Aug			19-Aug			26-Aug			09-Sep		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates																														
Cryptomonads					1			1	1							1														
Dictyocha speculum																													1	
Dinobryon balticum																														
Ebria tripartita		1													1				1											
Euglenoid																	1								1					
Phaeocystis pouchetii																														
Radiolarian																														
unid. Nanoflagellates		5	5		3	3		4	4	3	5	4	4	4	4	3	5	3	5	3	3	3	3	2	3	4	4	2	3	3
Zooplankton																														
Appendicularian																														
Ciliate		2			3	5		6	5	7	6	5	5	2	5	3	5	2	4	3	5	5	5	2	3	5	3	1	3	4
Copepod													1																	
Nauplius																							1	1	1					
Pluteus																														
Rotifer																			1	1		1								
Tintinnid									1	1	1	1							1			1						1		
Zoea																														
other													1																	
Dominant Species/Group																														
name	no sample	nanoflagellates	nanoflagellates	no sample	*Coscinodiscus sp.*	*Coscinodiscus sp.*	no sample	sm. dinoflagellates	*Coscinodiscus sp.*	dinoflagellates	diatoms	diatoms	dinoflagellates	dinoflagellates	dinoflagellates	"e" nanoflagellate	dinoflagellates	*Pseudonitzschia sp.*	*Prorocentrum gracile*	*Prorocentrum gracile*	*Coscinodiscus sp.*	*Cochlodinum sp. 99*	*Cochlodinum sp. 99*	*Cochlodinum sp. 99*	*Cochlodinum sp. 99*	*Cochlodinum sp. 99*	*Cochlodinum sp. 99*	*Cochlodinum sp. 99*	*Cochlodinum sp. 99*	*Cochlodinum sp. 99*
count (cells/mL)		~5000	~5000		20	16		120	10	~50	~200	~200	170	~50	~40	500	170	120	170	~80	~5	8300	335	160	6100	2100	1600	1700	1400	780
% constituent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Diatoms	40	40	30	81	81	79	30	30	50	30	35	55	10	15	15	35	35	60	10	25	50	0	1	10	1	1	0	0	1	2
Dinoflagellates	5	5	3	8	8	10	35	35	20	35	30	20	45	55	50	25	40	25	70	60	40	98	97	84	97	95	95	98	95	94
Raphidophytes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	1	1	0	0	1	0	0	0	0
Other Flagellates	45	45	57	3	3	1	10	10	10	5	5	5	15	15	15	30	10	5	7	2	1	0	0	1	1	1	1	1	1	1
Zooplankton	10	10	10	8	8	10	25	25	20	30	30	20	30	15	20	10	15	10	10	12	9	1	1	5	1	2	4	1	3	3
Biomass													3.0	2.0	2.0	2.5	3.0	3.0	3.5	3.0	3.0	4.5	3.5	3.0	4.5	4.0	3.5	4.0	4.0	3.5

Table 54 cont'd

date	16-Sep			23-Sep			07-Oct		
depth	1m	5m	10m	1m	5m	10m	1m	5m	10m
Other Flagellates									
Cryptomonads									
Dictyocha speculum				1	1	1	1		1
Dinobryon balticum									
Ebria tripartita									
Euglenoid									
Phaeocystis pouchetii									
Radiolarian									
unid. Nanoflagellates	3	5	4	4	5	4	2	4	3
Zooplankton									
Appendicularian									
Ciliate	1	1	3	3	1	1	2	2	2
Copepod						1			
Nauplius		1						1	
Pluteus									
Rotifer					1	1			
Tintinnid								1	
Zoea									
other									
Dominant Species/Group									
name	*Cochlodinum sp. 99*	*Cochlodinum sp. 99*	*Cochlodinum sp. 99*	*Skeletonema costatum*	*Skeletonema costatum*	*Skeletonema costatum*	*Cochlodinum sp. 99*	*Cochlodinum sp. 99*	*Cochlodinum sp. 99*
count (cells/mL)	190	190	550	400	540	600	21	25	15
% constituent	100	100	100	100	100	100	100	100	100
Diatoms	5	5	5	50	60	60	5	0	10
Dinoflagellates	92	91	91	35	30	25	85	80	75
Raphidophytes	0	0	0	0	0	0	0	0	0
Other Flagellates	1	2	1	5	5	5	2	5	5
Zooplankton	2	2	3	10	5	10	8	15	10
Biomass	3.0	3.0	3.5	3.0	3.0	3.0	1.5	2.0	1.5

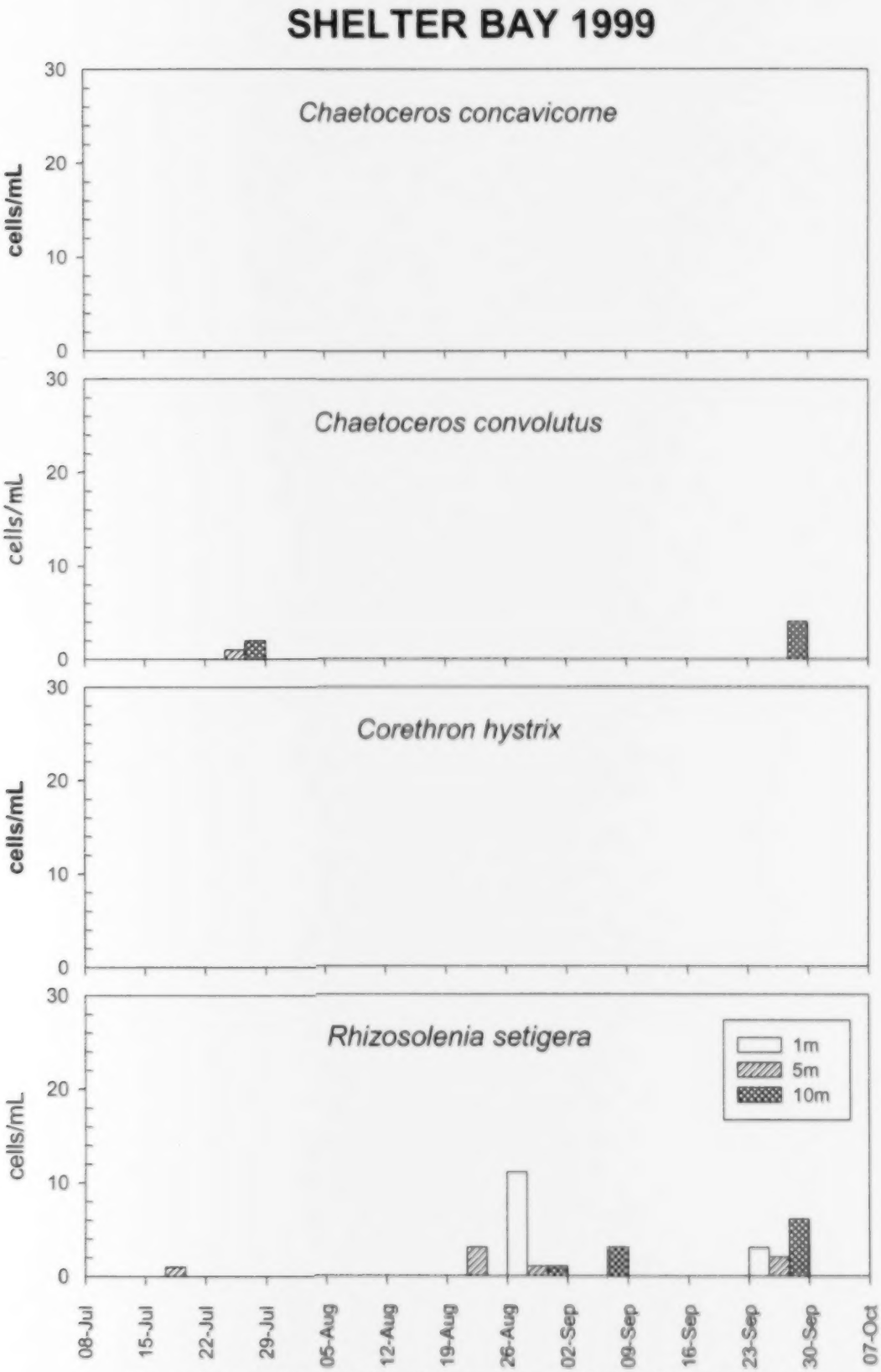

Figure 2: Harmful phytoplankton species in Shelter Bay samples.

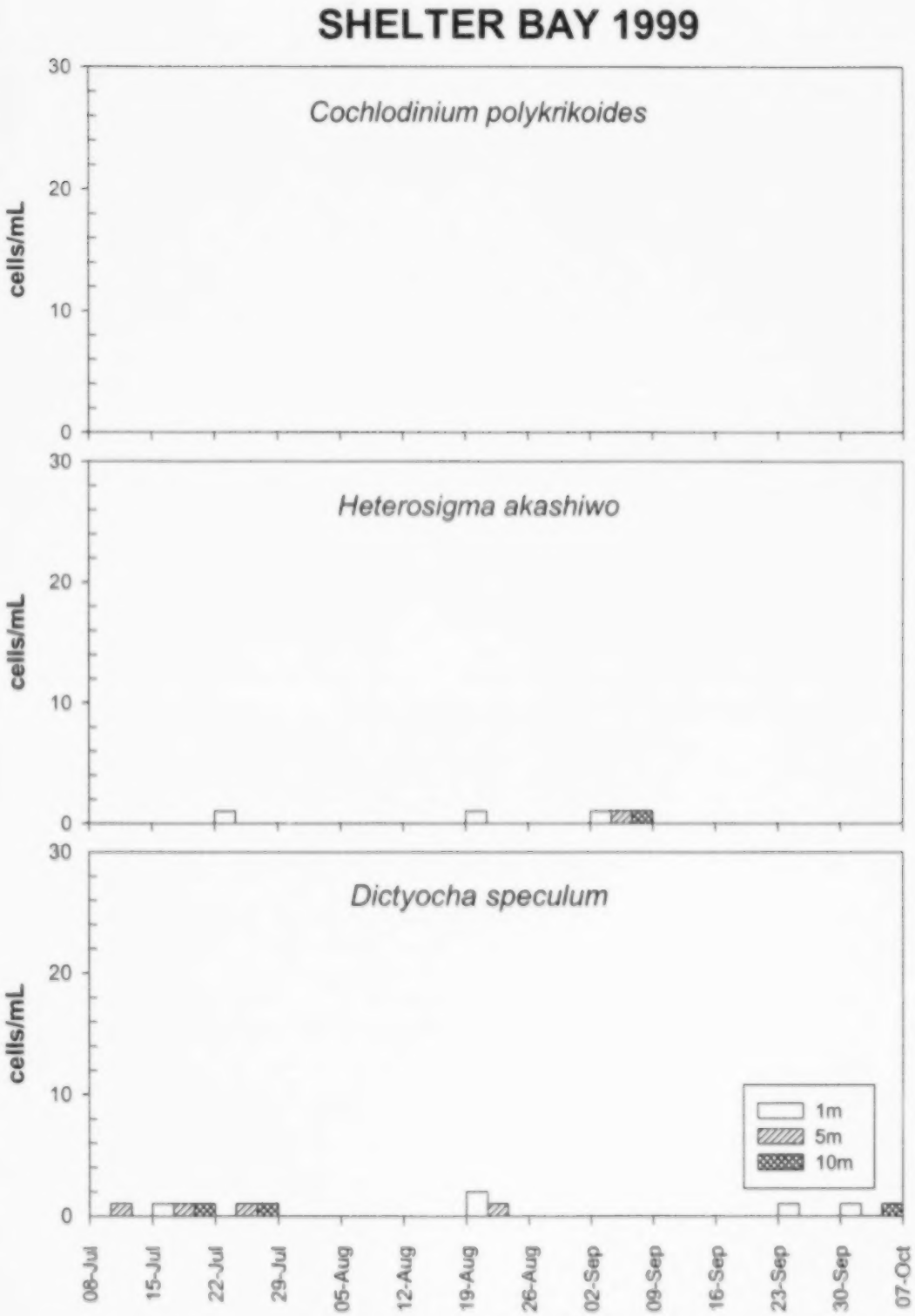

Figure 3: Harmful phytoplankton species in Shelter Bay samples.

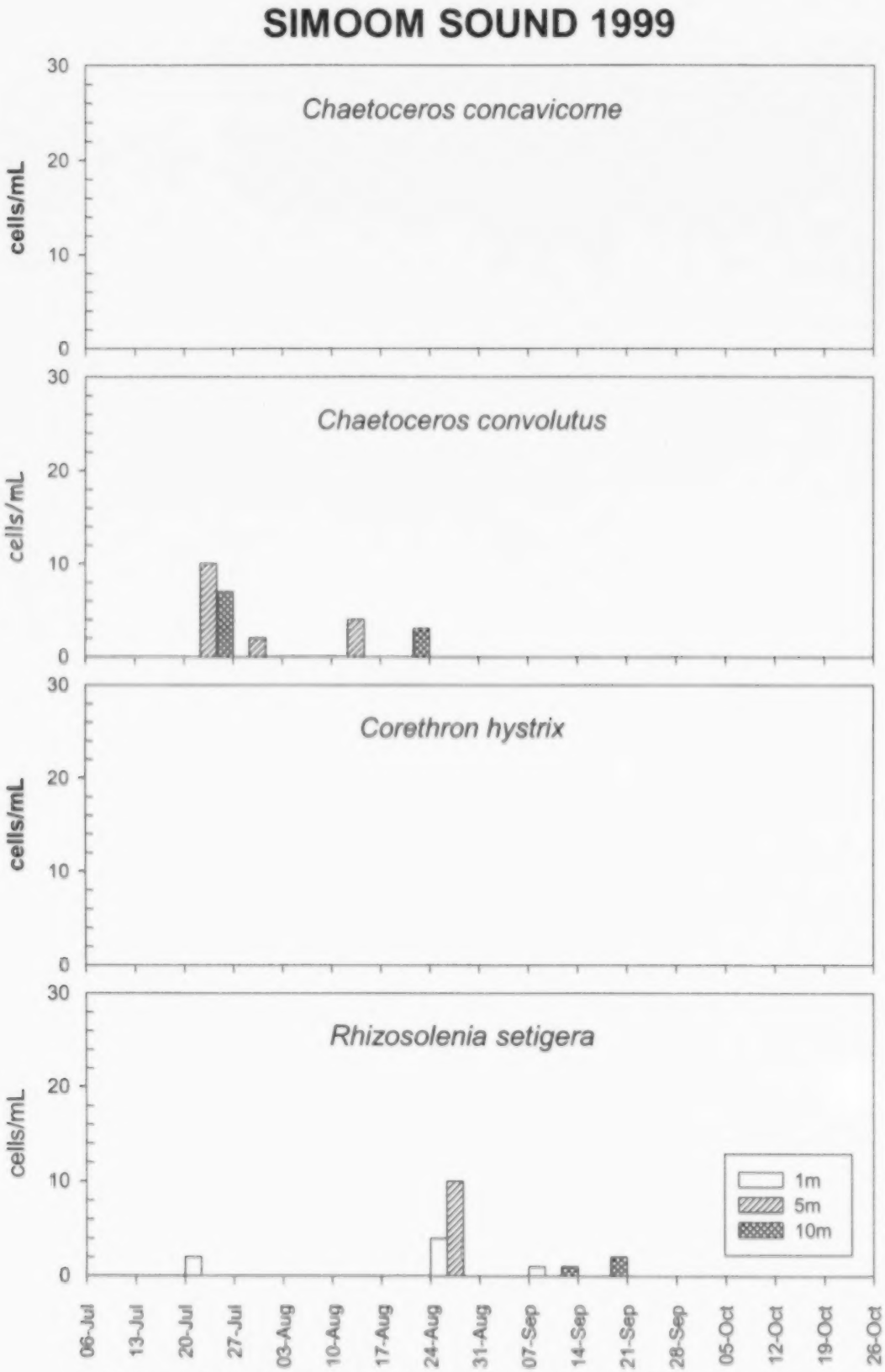

Figure 4: Harmful phytoplankton species in Simoom Sound samples.

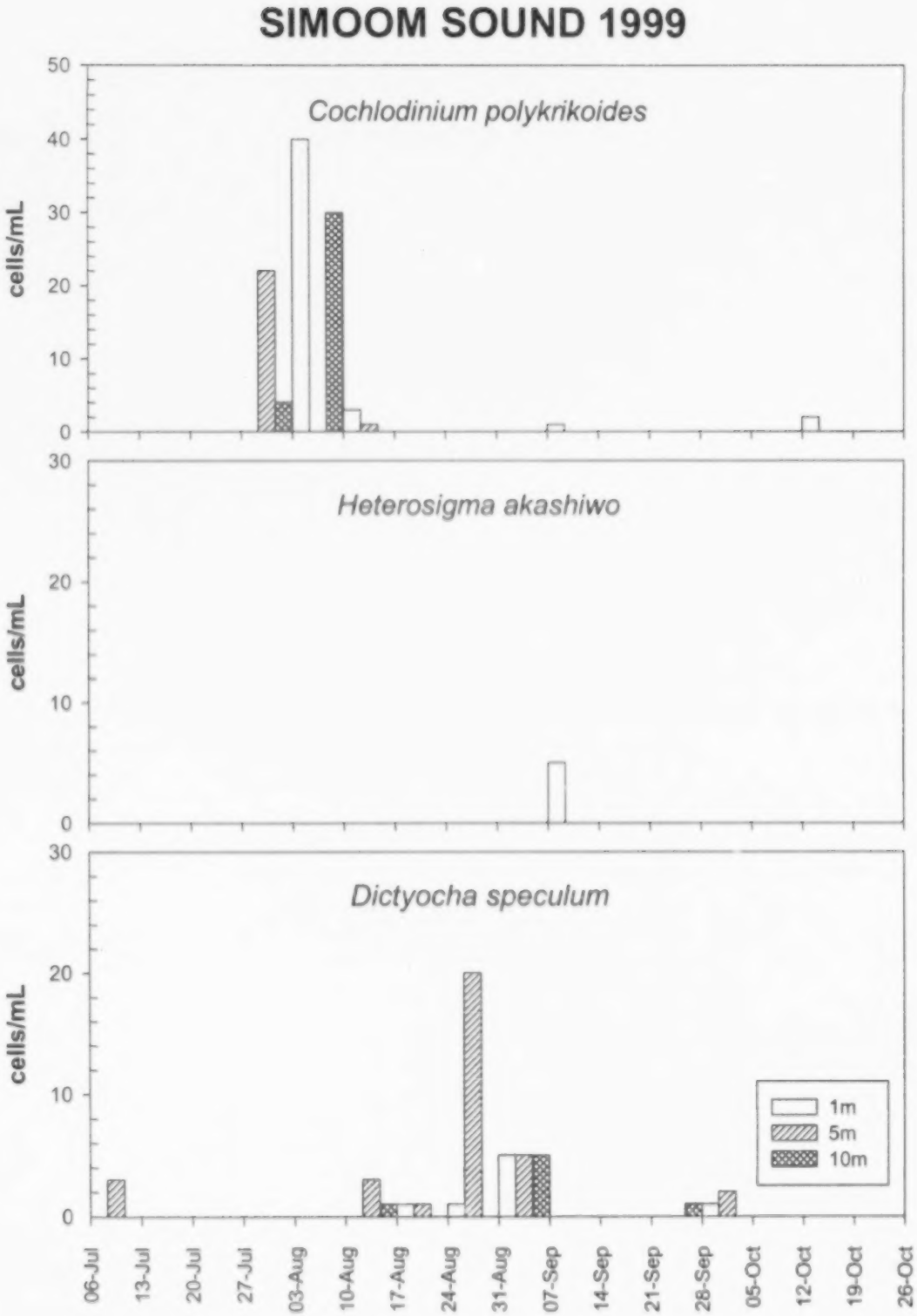

Figure 5: Harmful phytoplankton species in Simoom Sound samples.

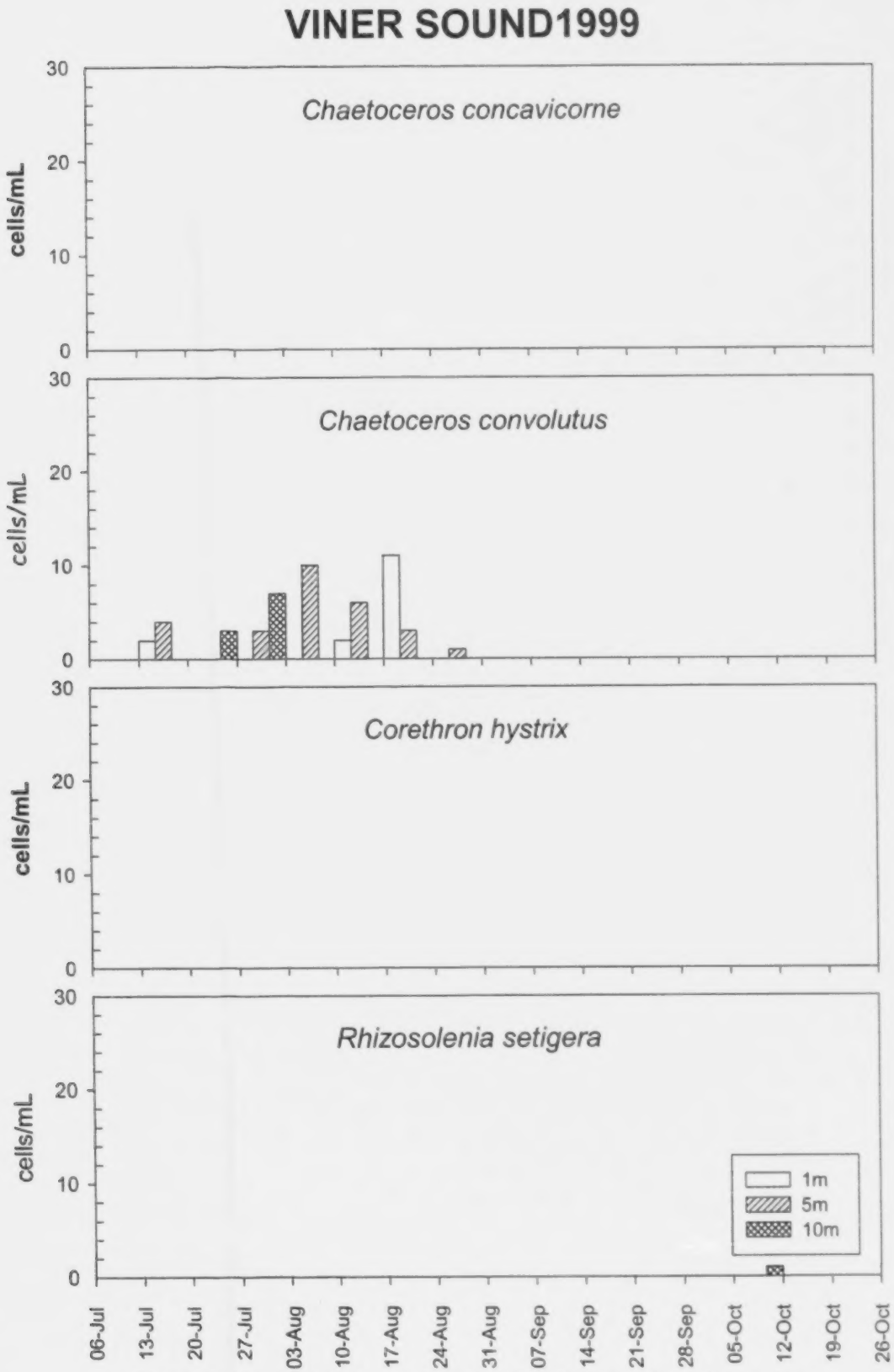

Figure 6: Harmful phytoplankton species in Viner Sound samples.

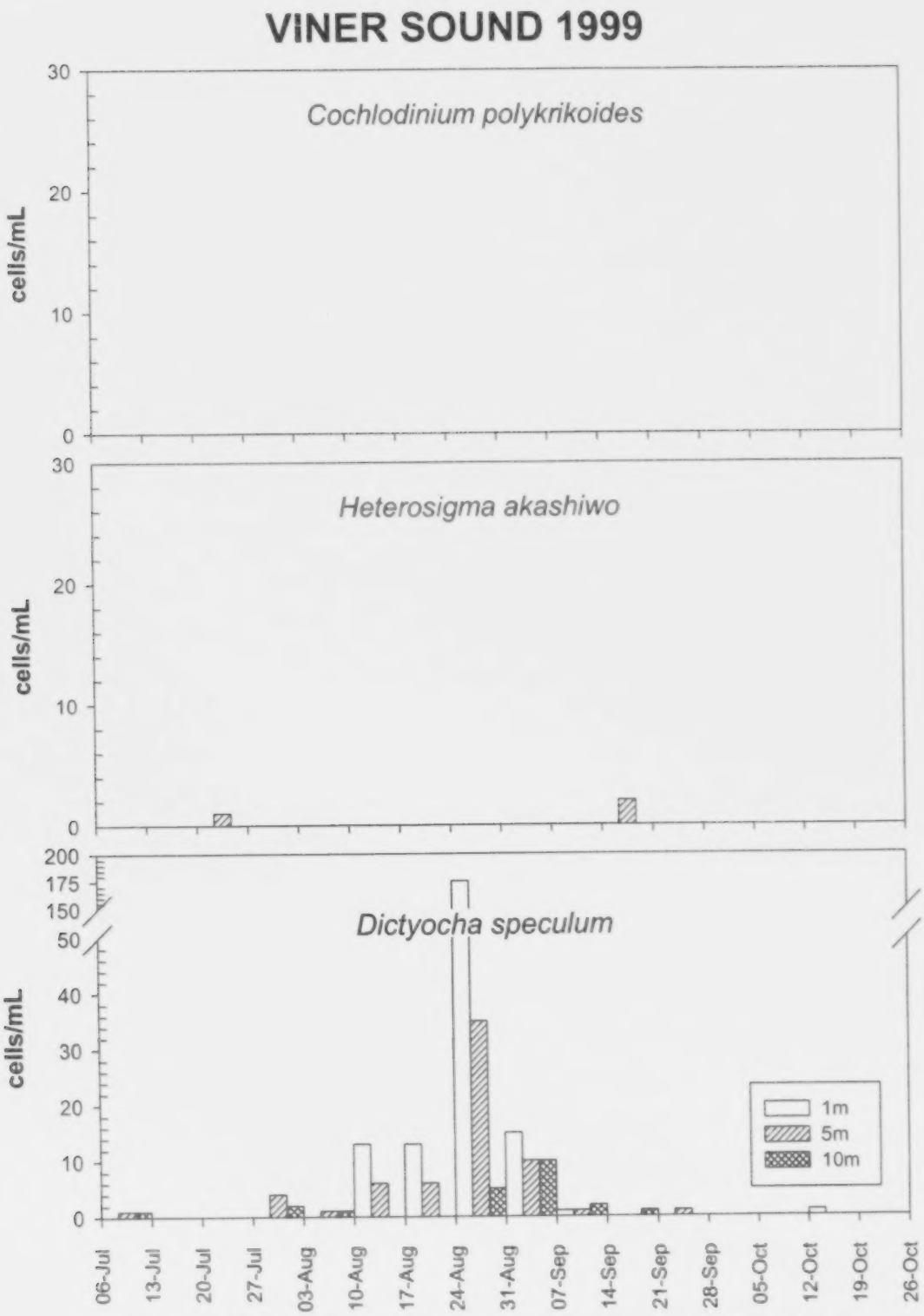

Figure 7: Harmful phytoplankton species in Viner Sound samples.

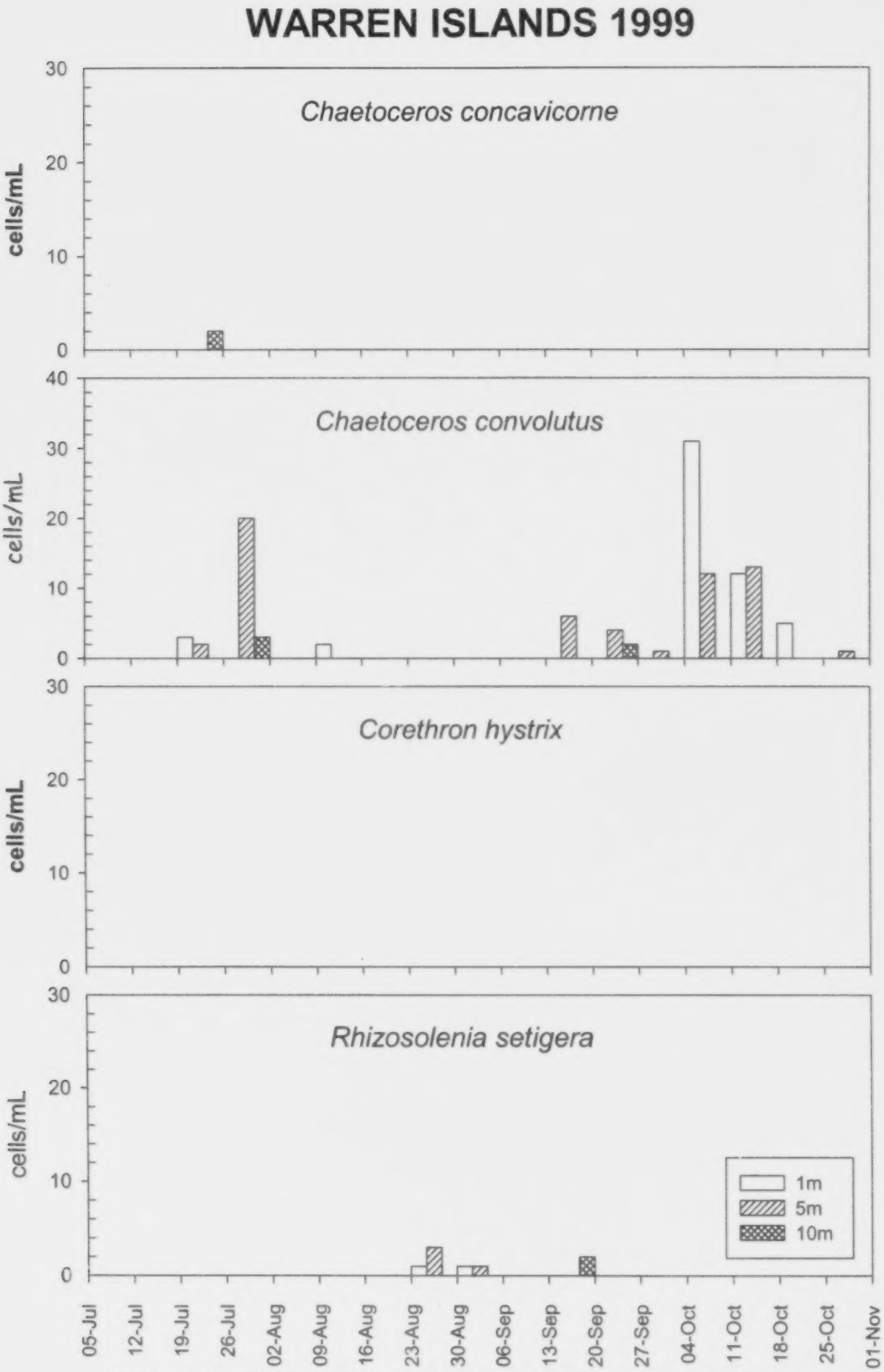

Figure 8: Harmful phytoplankton species in Warren Islands samples.

WARREN ISLANDS 1999

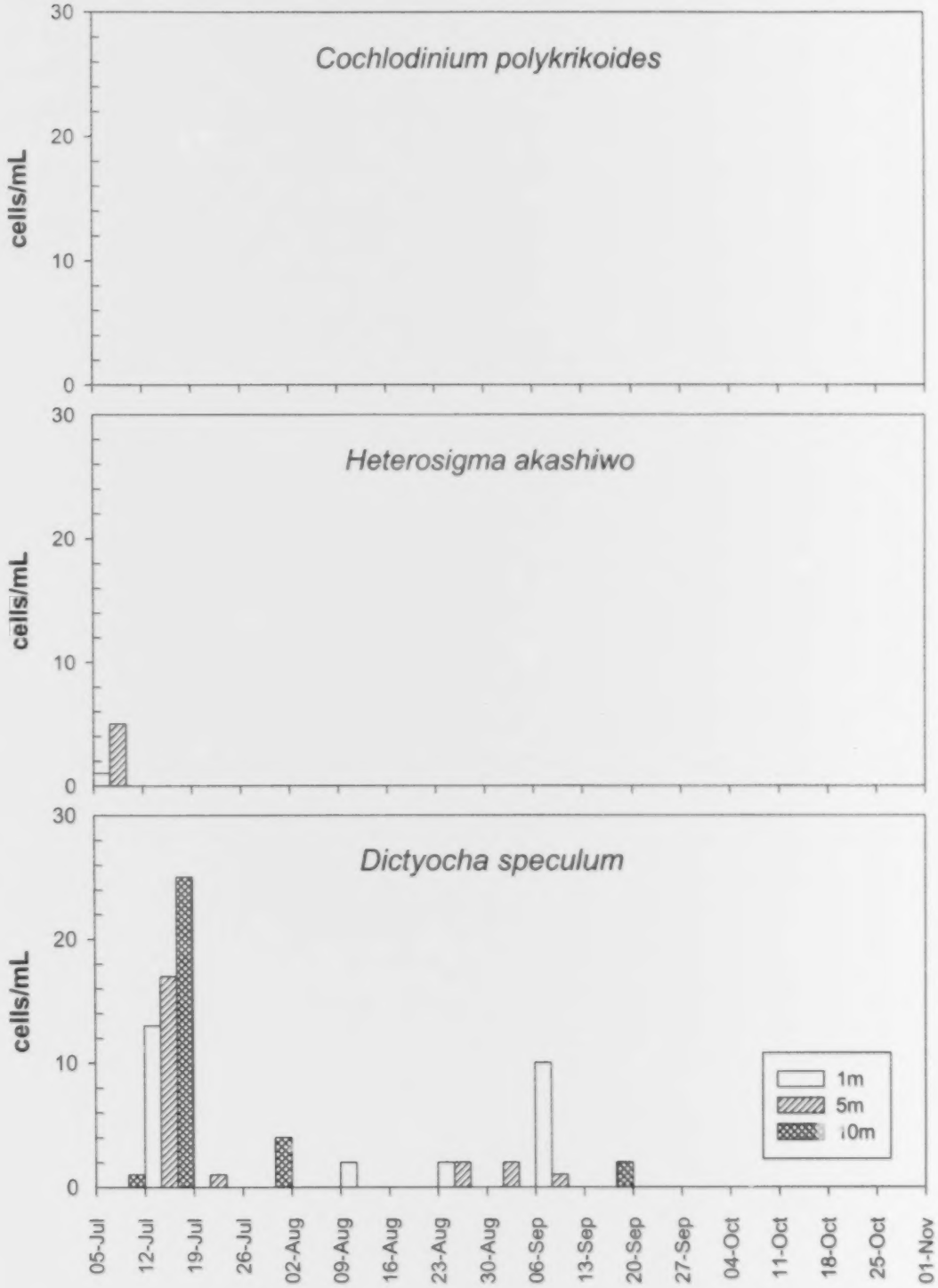

Figure 9: Harmful phytoplankton species in Warren Islands samples.

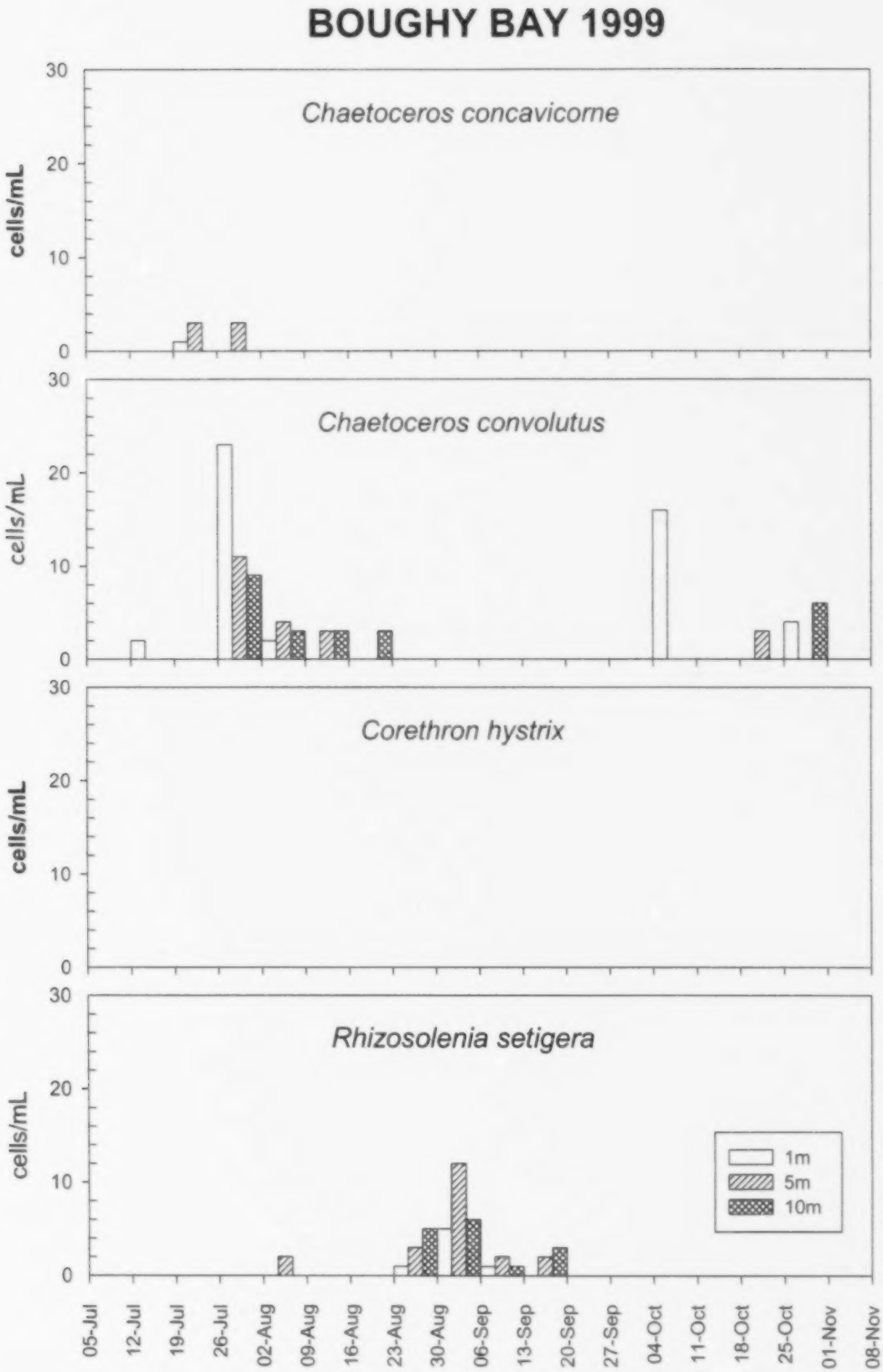

Figure 10: Harmful phytoplankton species in Boughy Bay samples.

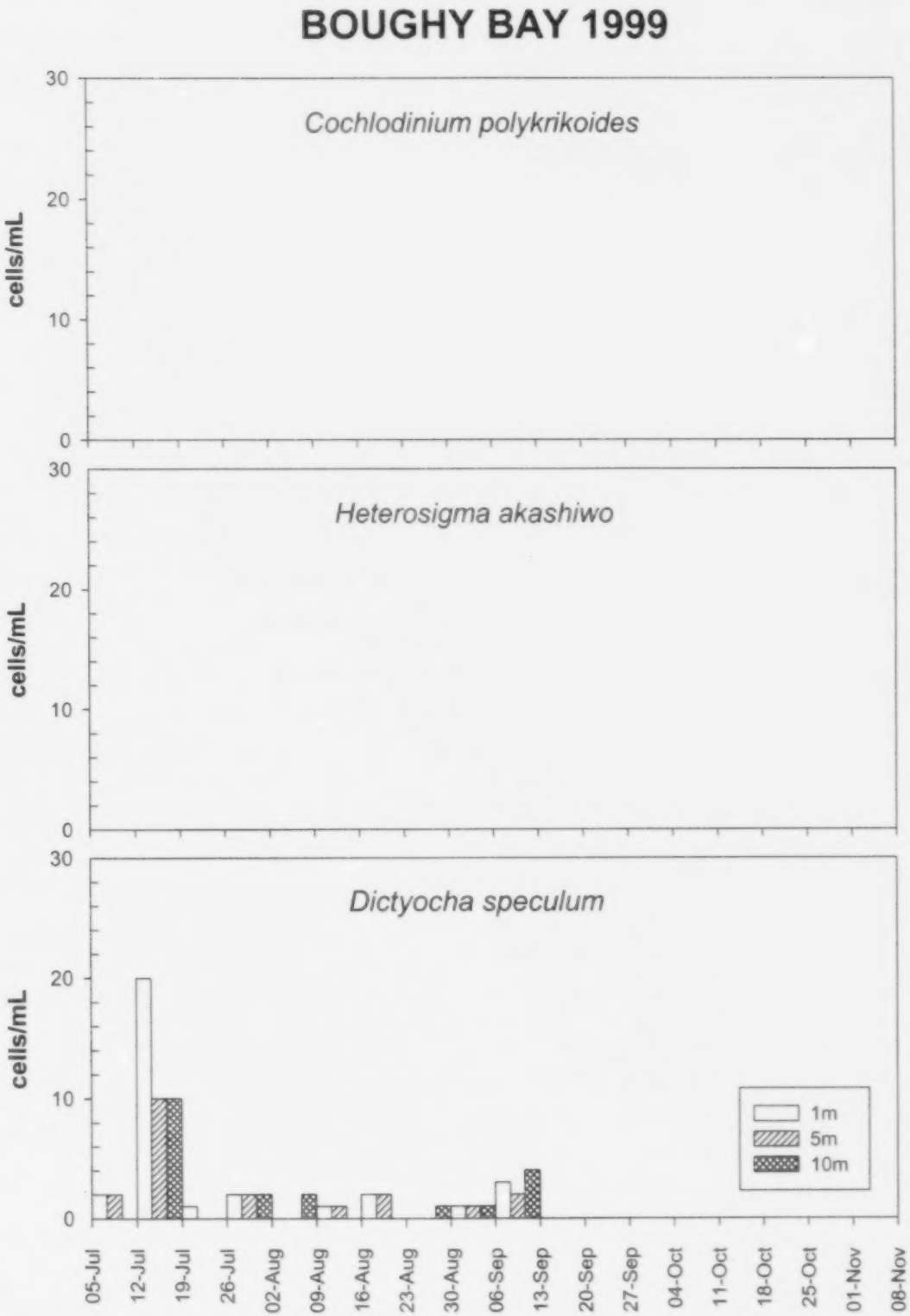

Figure 11: Harmful phytoplankton species in Boughy Bay samples.

CHANCELLOR CHANNEL1999

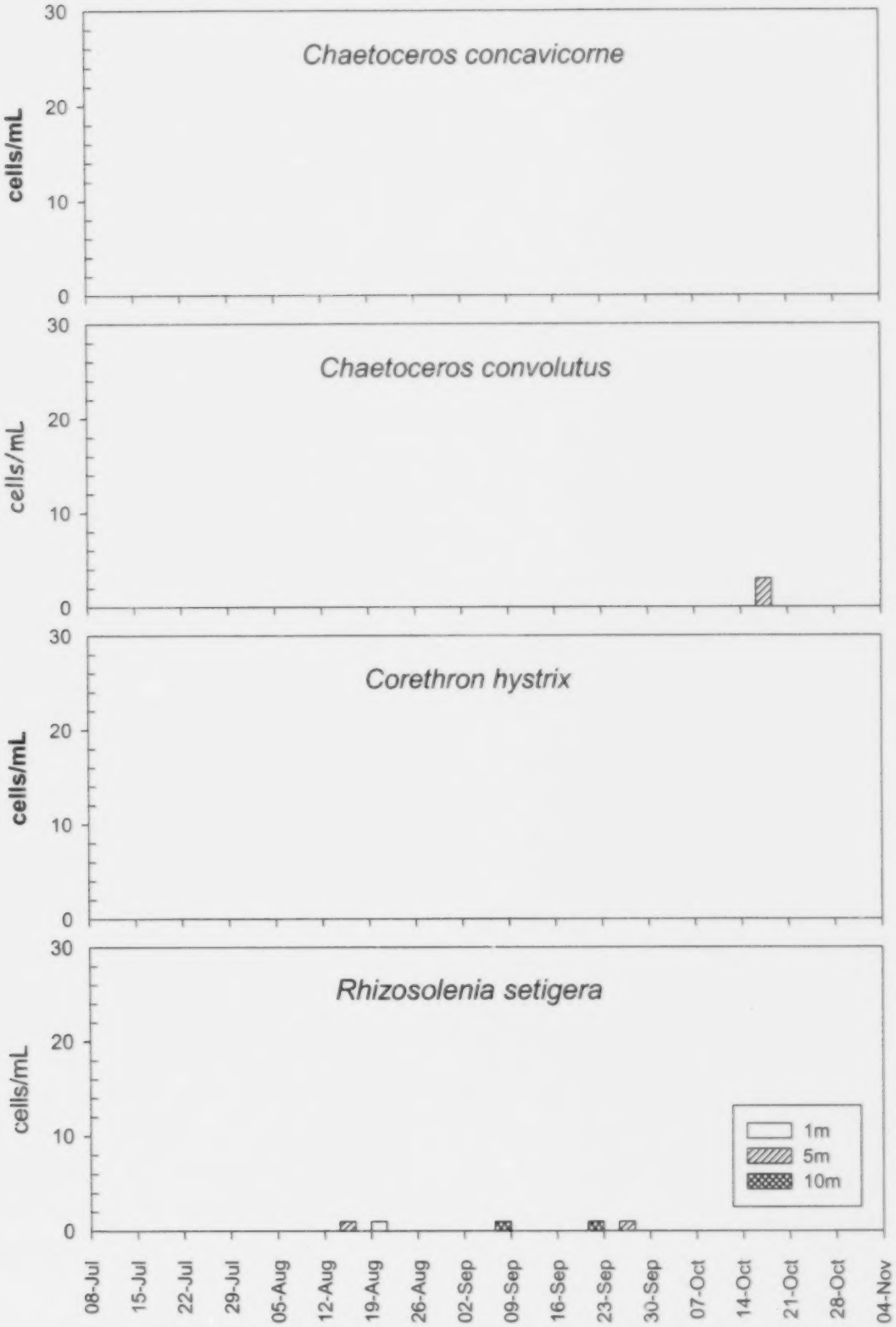

Figure 12: Harmful phytoplankton species in Chancellor Channel samples.

CHANCELLOR CHANNEL 1999

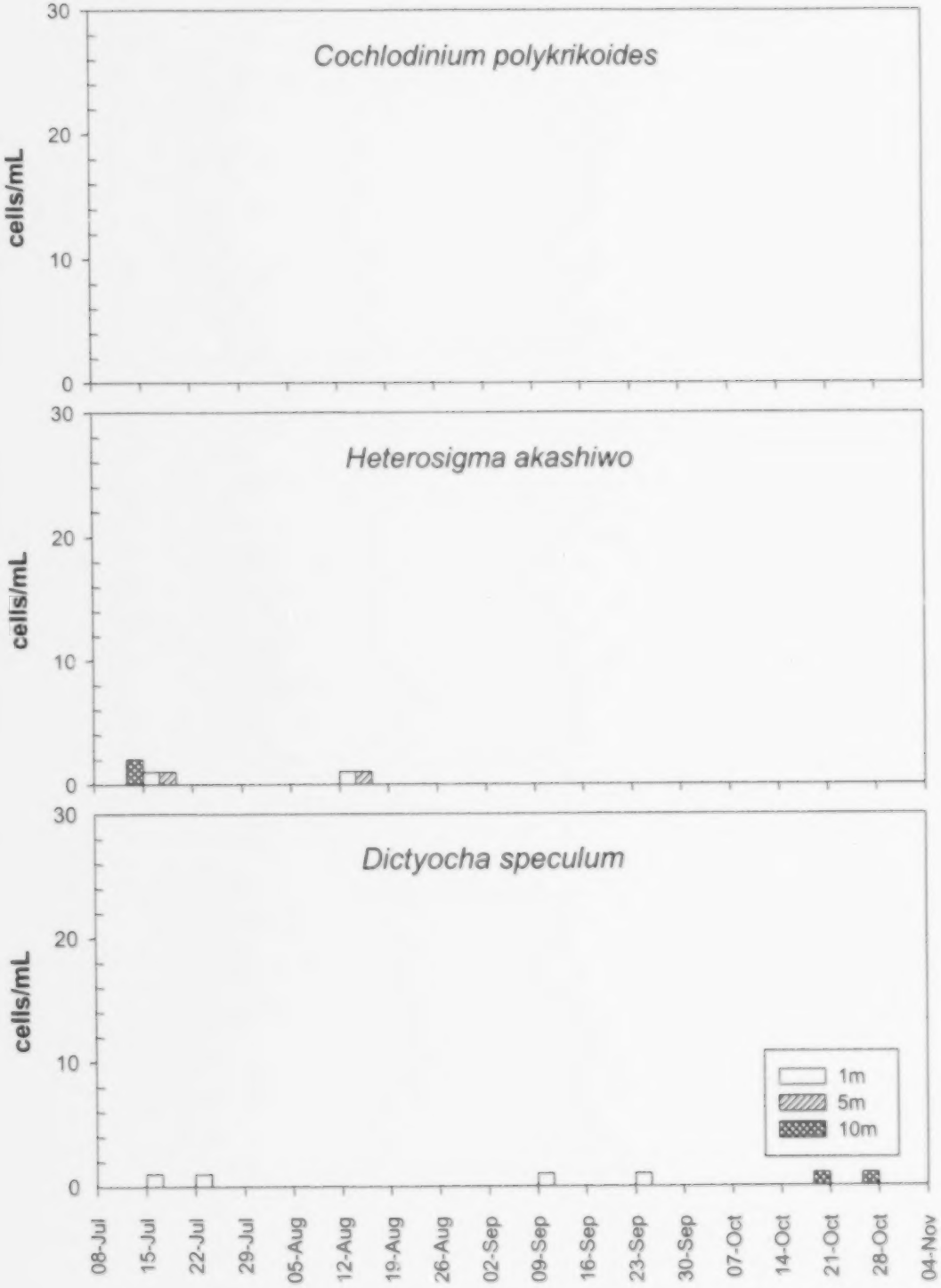

Figure 13: Harmful phytoplankton species in Chancellor Channel samples.

HOMFRAY CREEK 1999

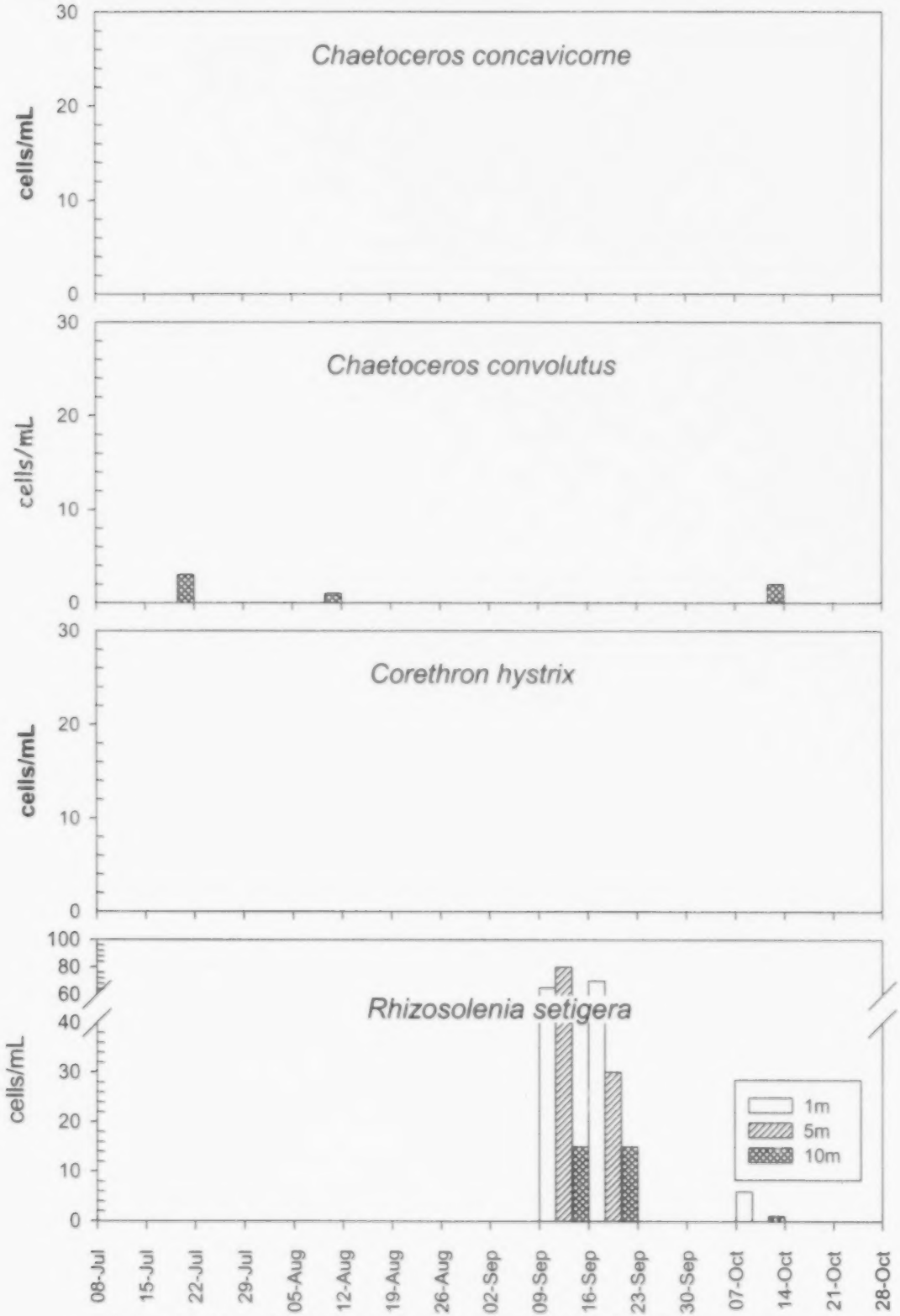

Figure 14: Harmful phytoplankton species in Homfray Creek samples.

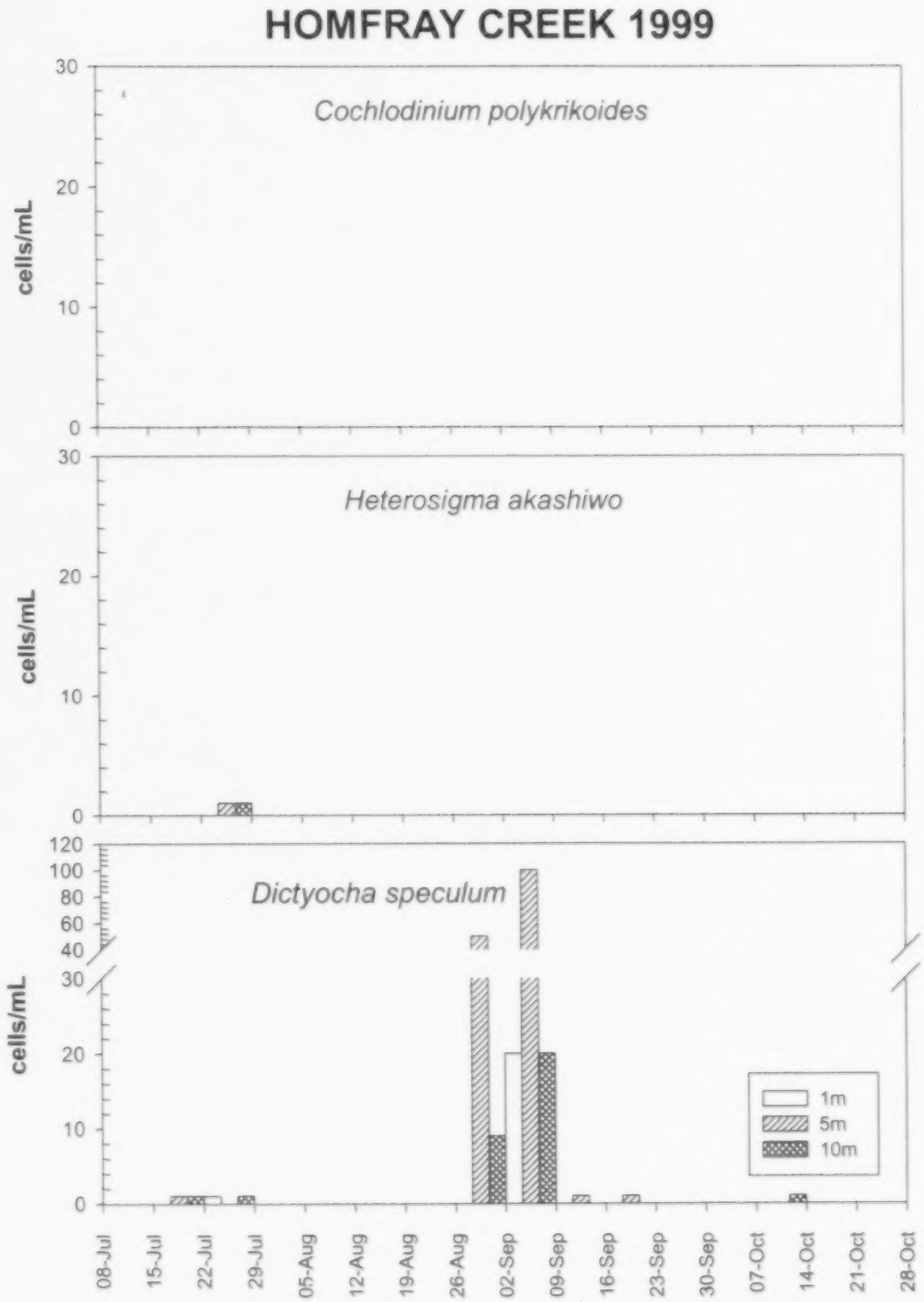

Figure 15: Harmful phytoplankton species in Homfray Creek samples.

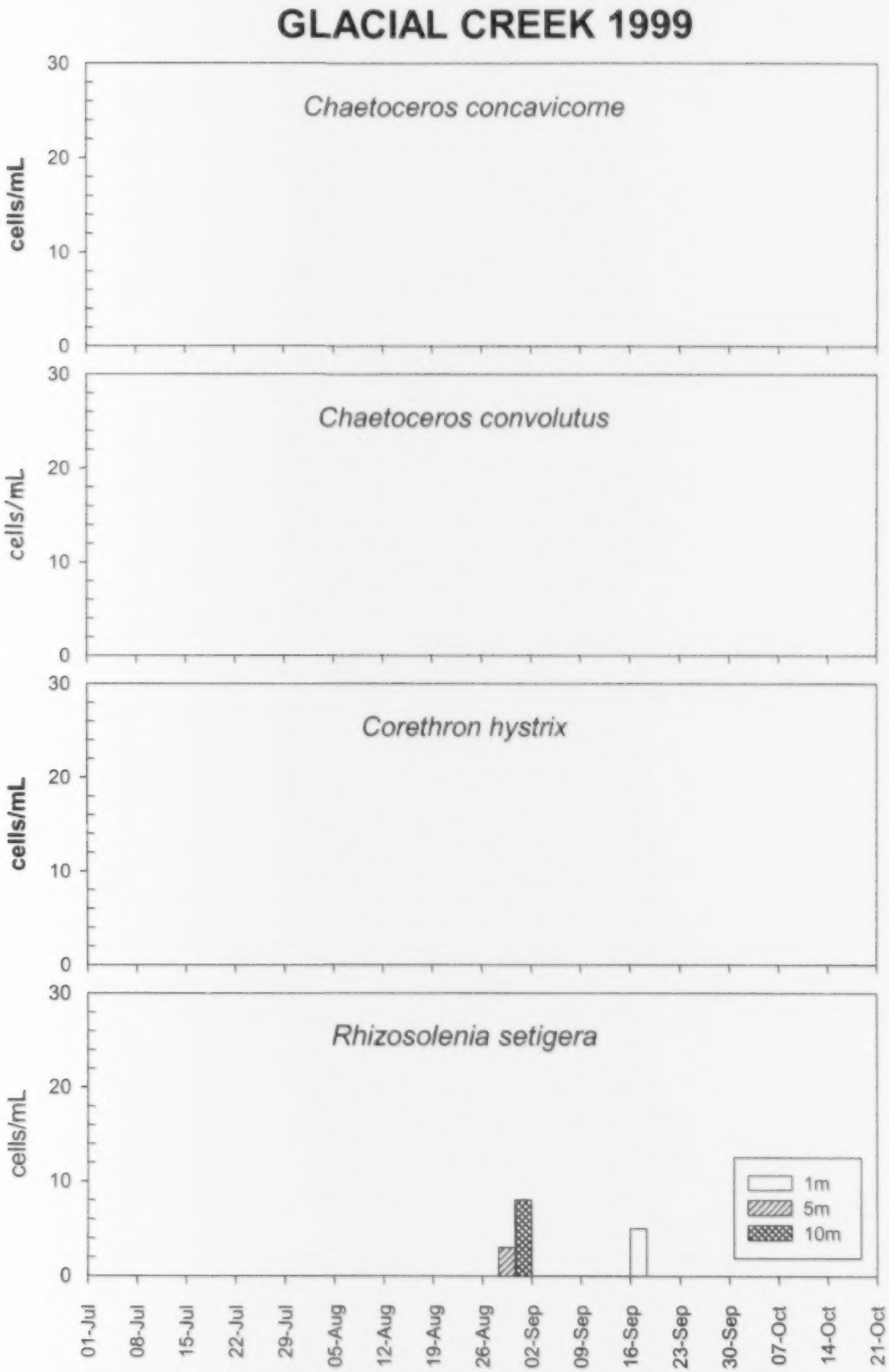

Figure 16: Harmful phytoplankton species in Glacial Creek samples.

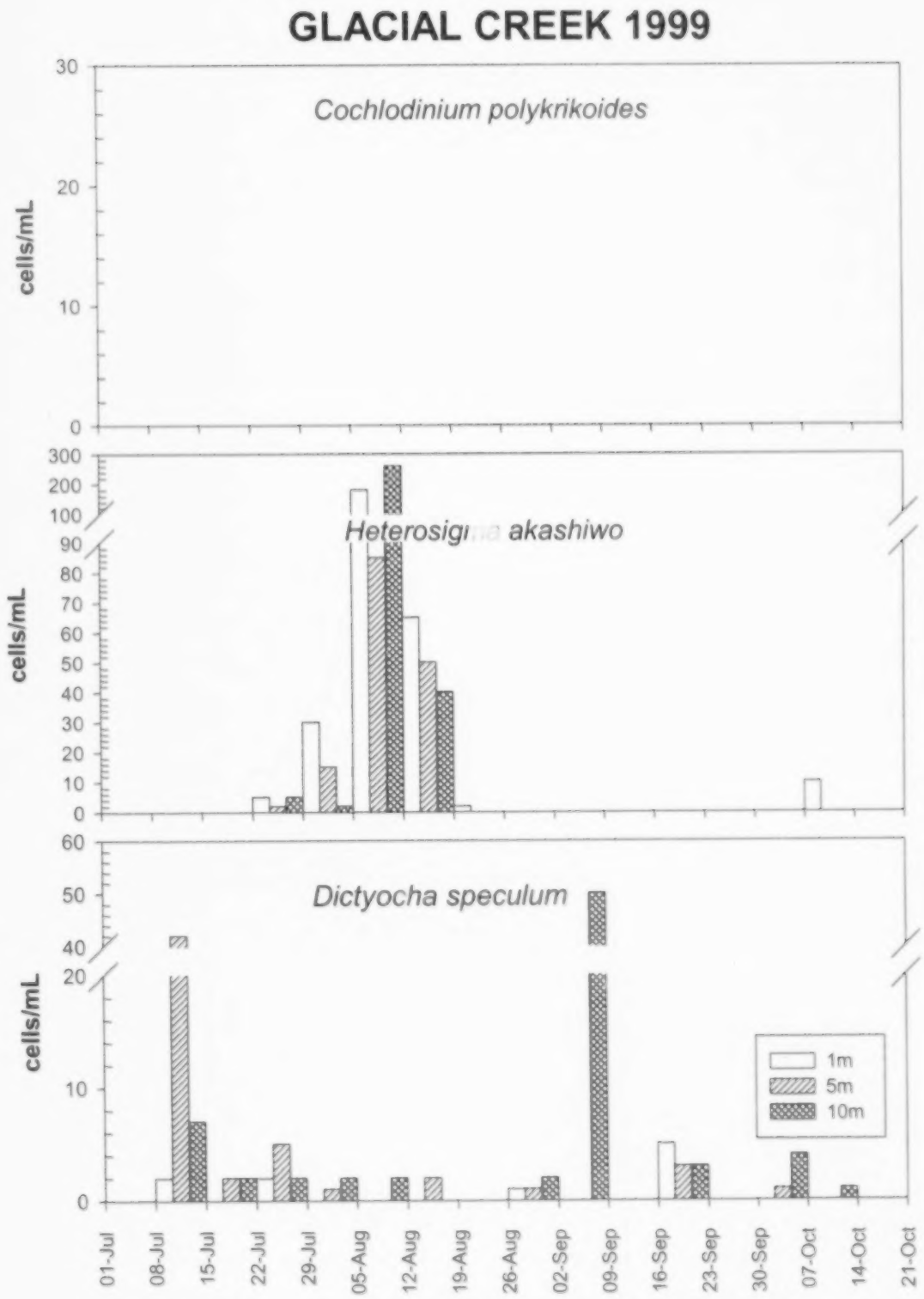

Figure 17: Harmful phytoplankton species in Glacial Creek samples.

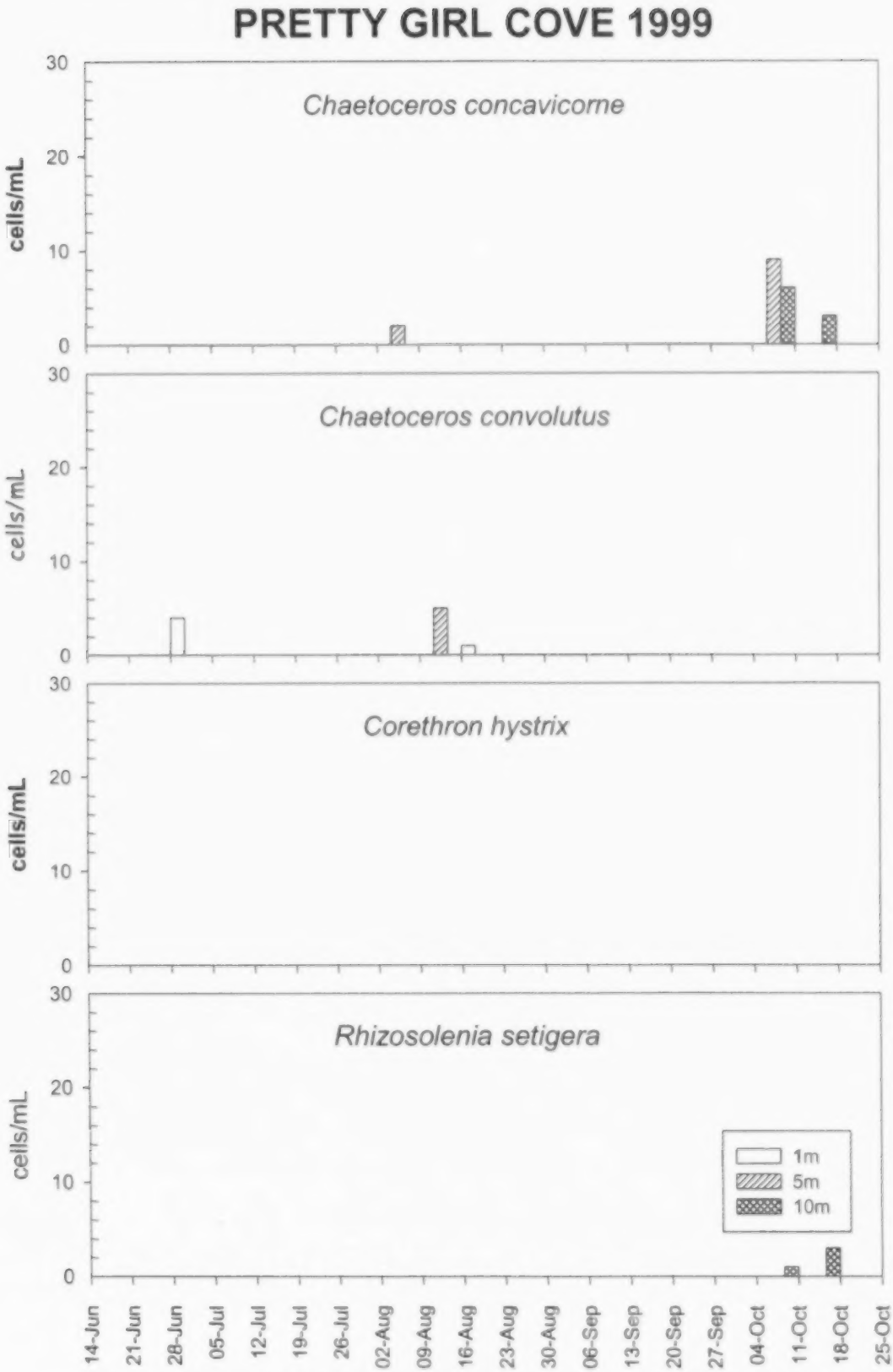

Figure 18: Harmful phytoplankton species in Pretty Girl Cove samples.

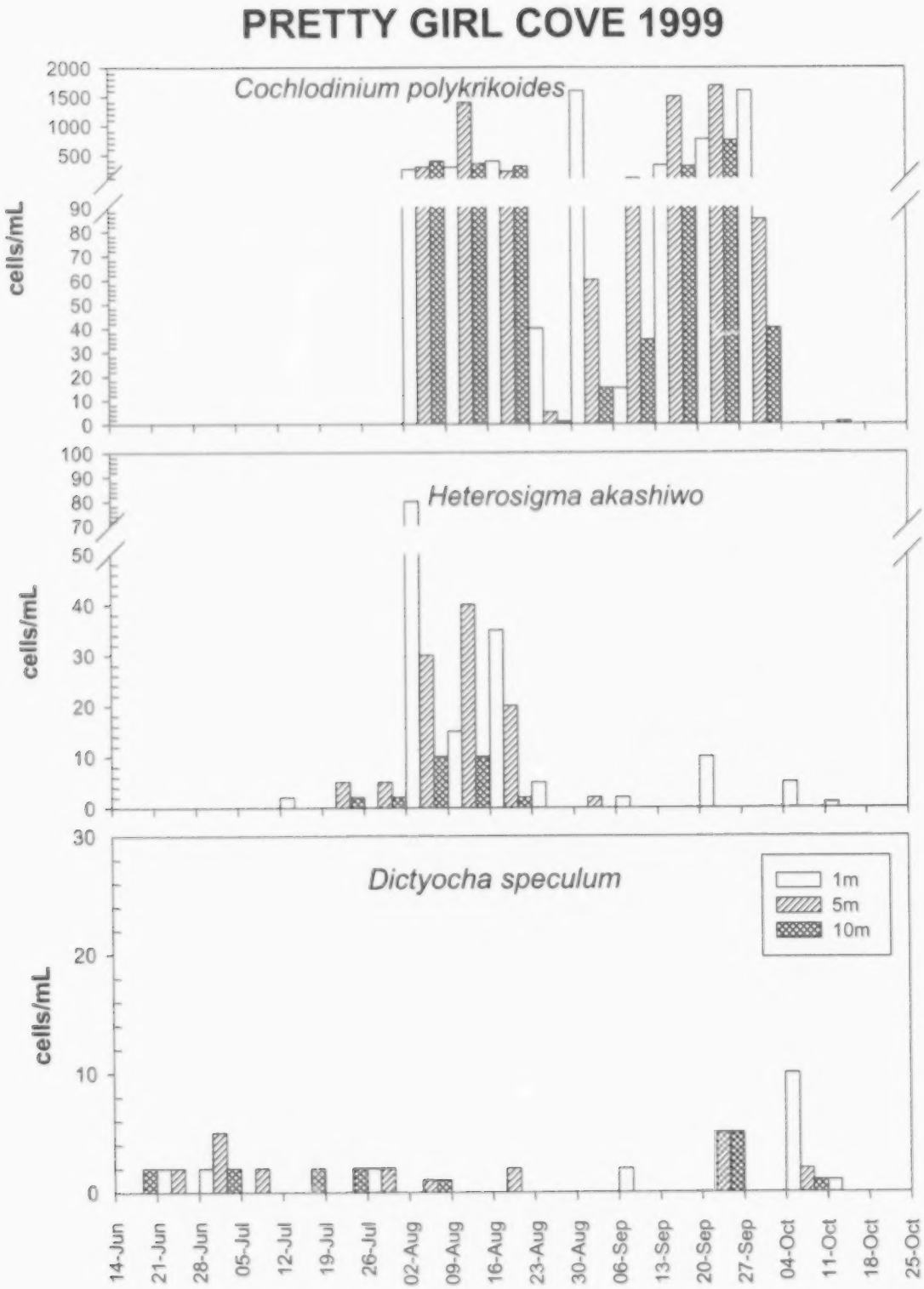

Figure 19: Harmful phytoplankton species in Pretty Girl Cove samples.

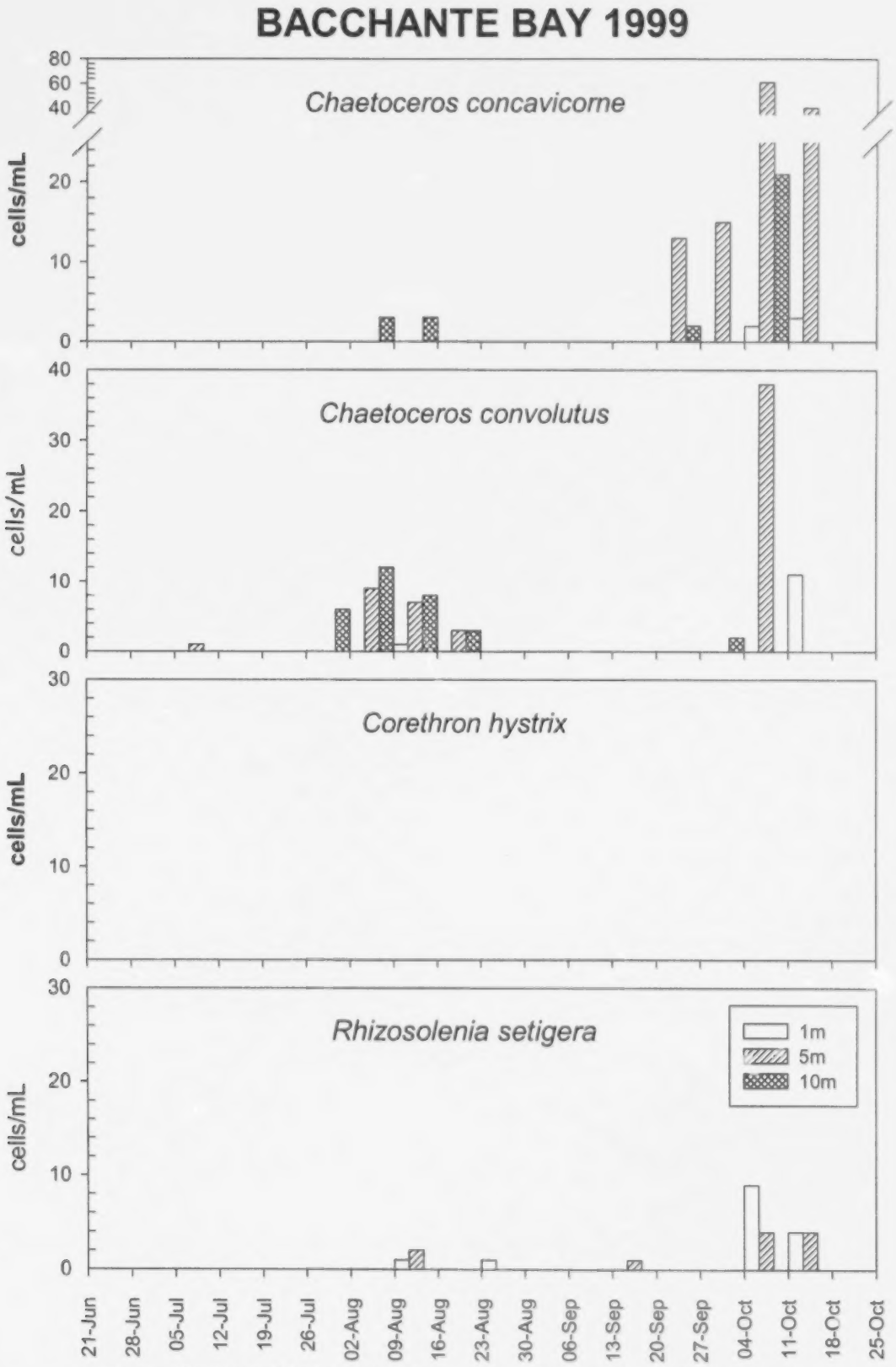

Figure 20: Harmful phytoplankton species in Bacchante Bay samples.

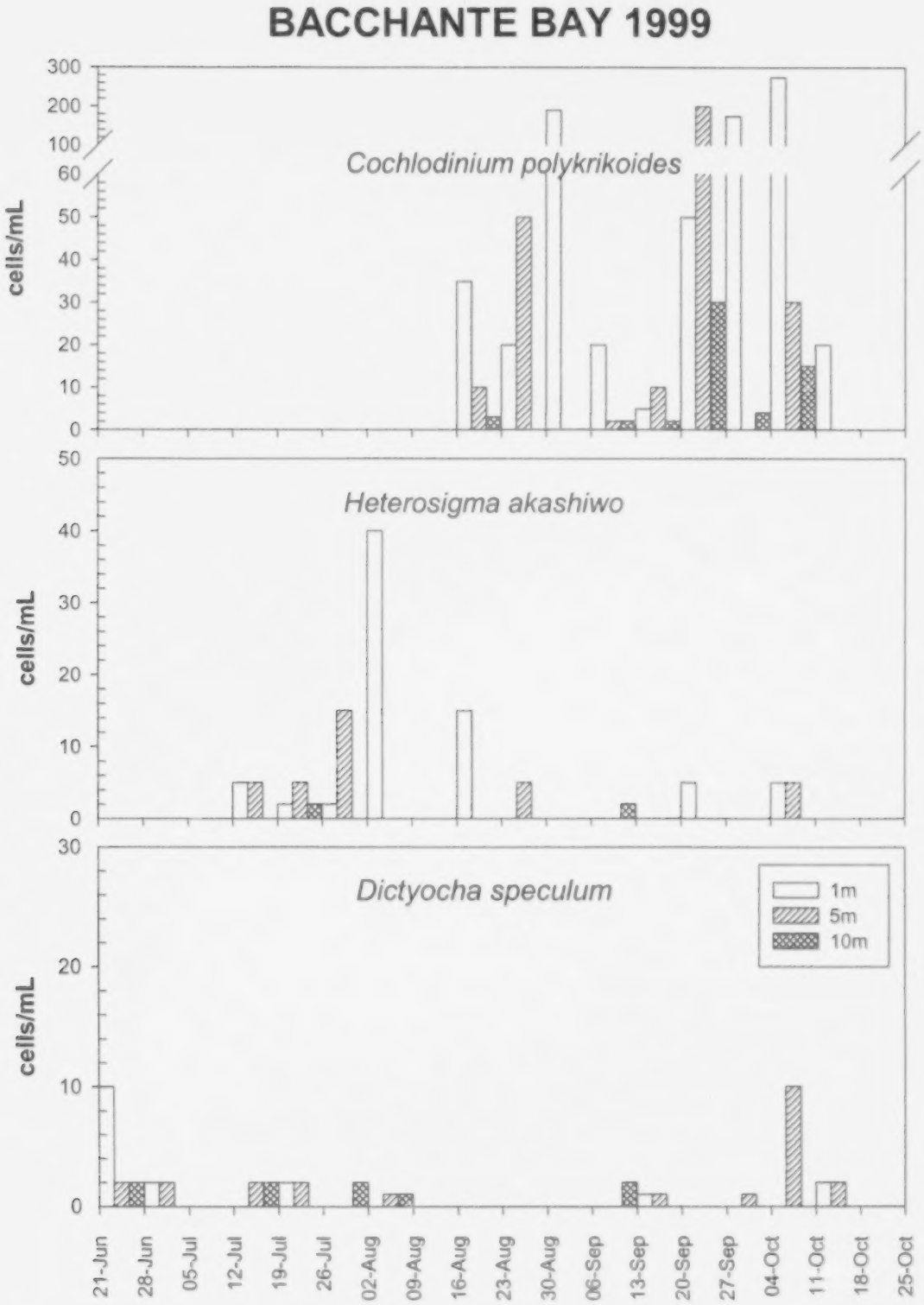

Figure 21: Harmful phytoplankton species in Bacchante Bay samples.

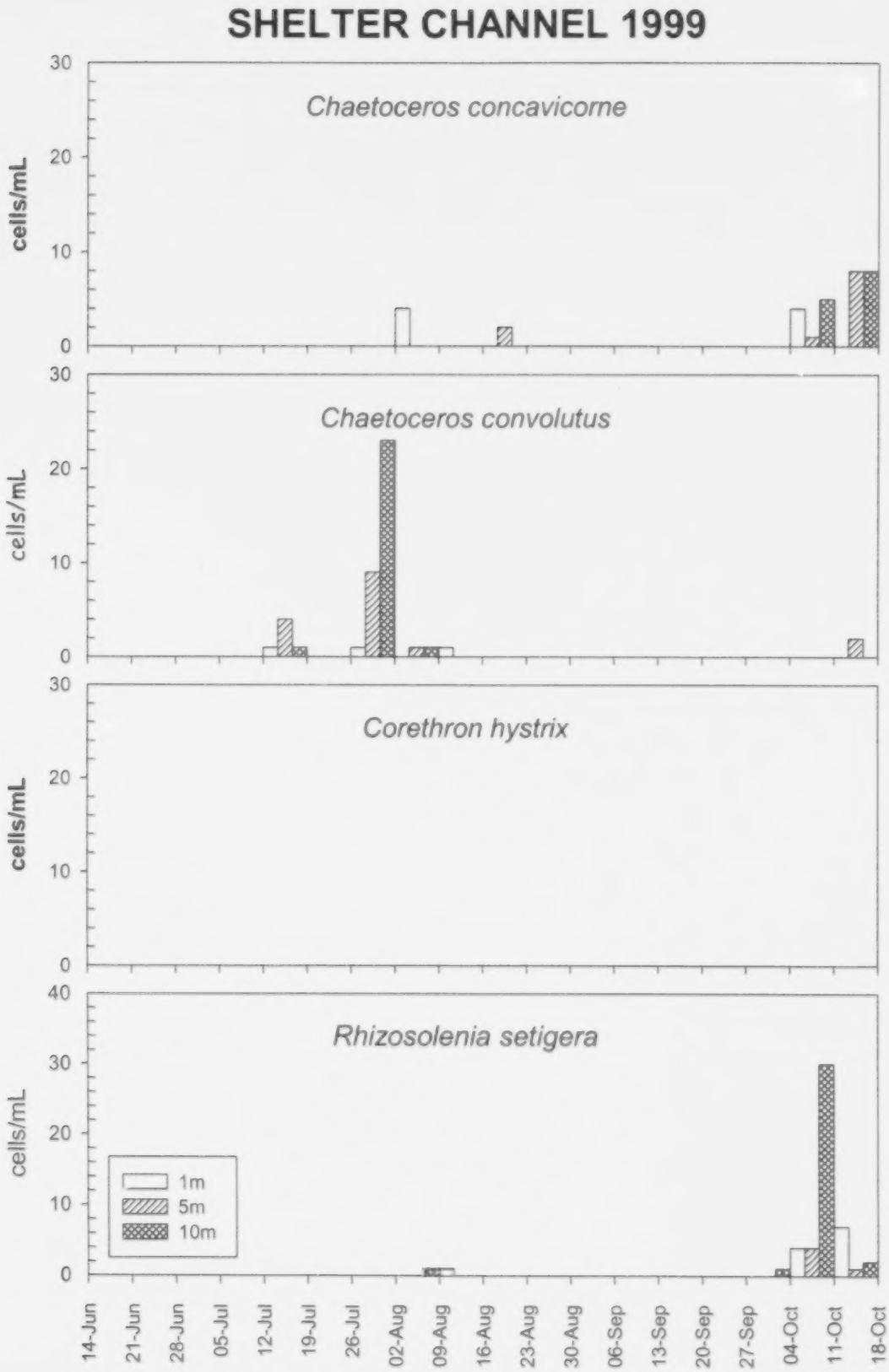

Figure 22: Harmful phytoplankton species in Shelter Channel samples.

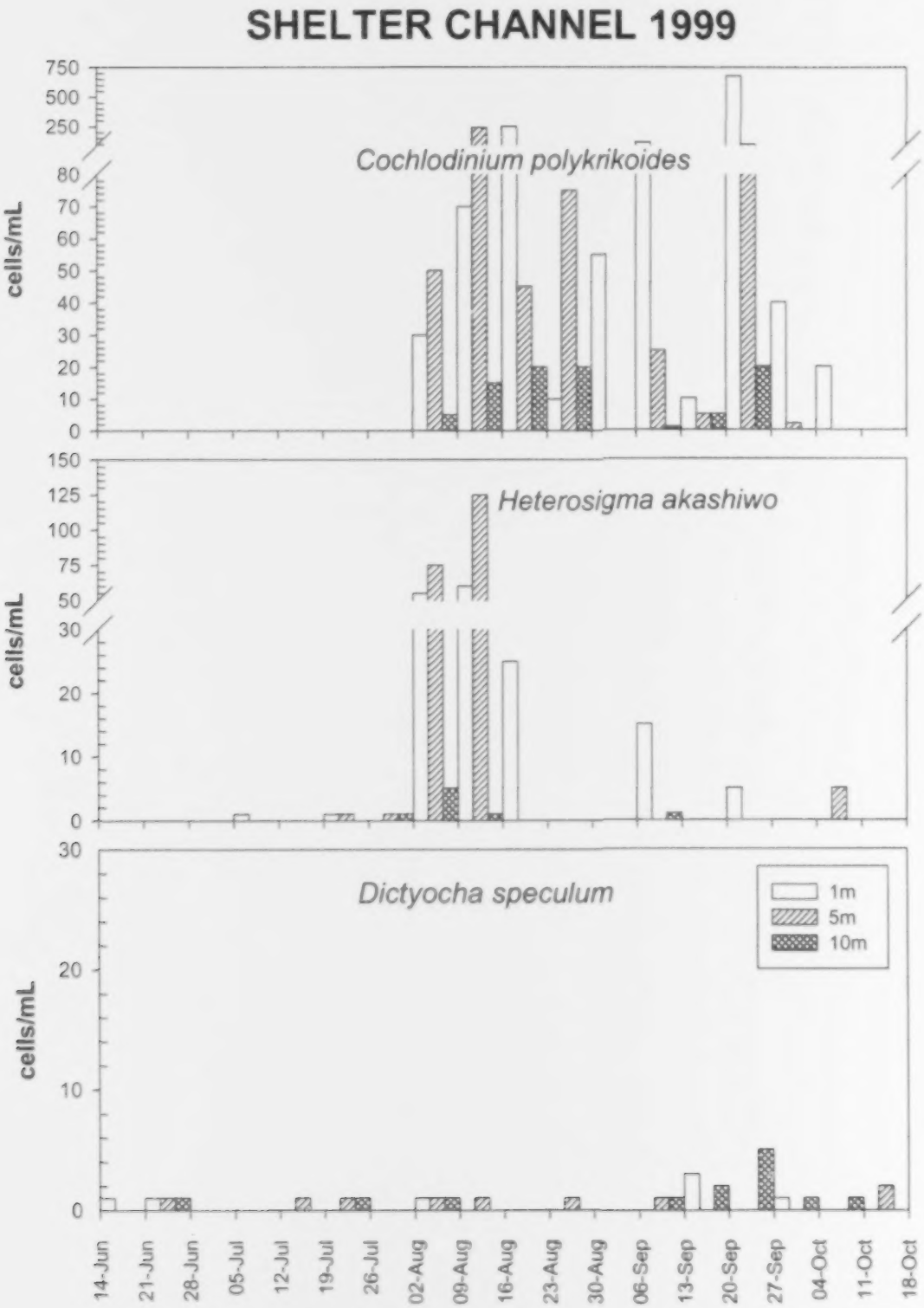

Figure 23: Harmful phytoplankton species in Shelter Channel samples.

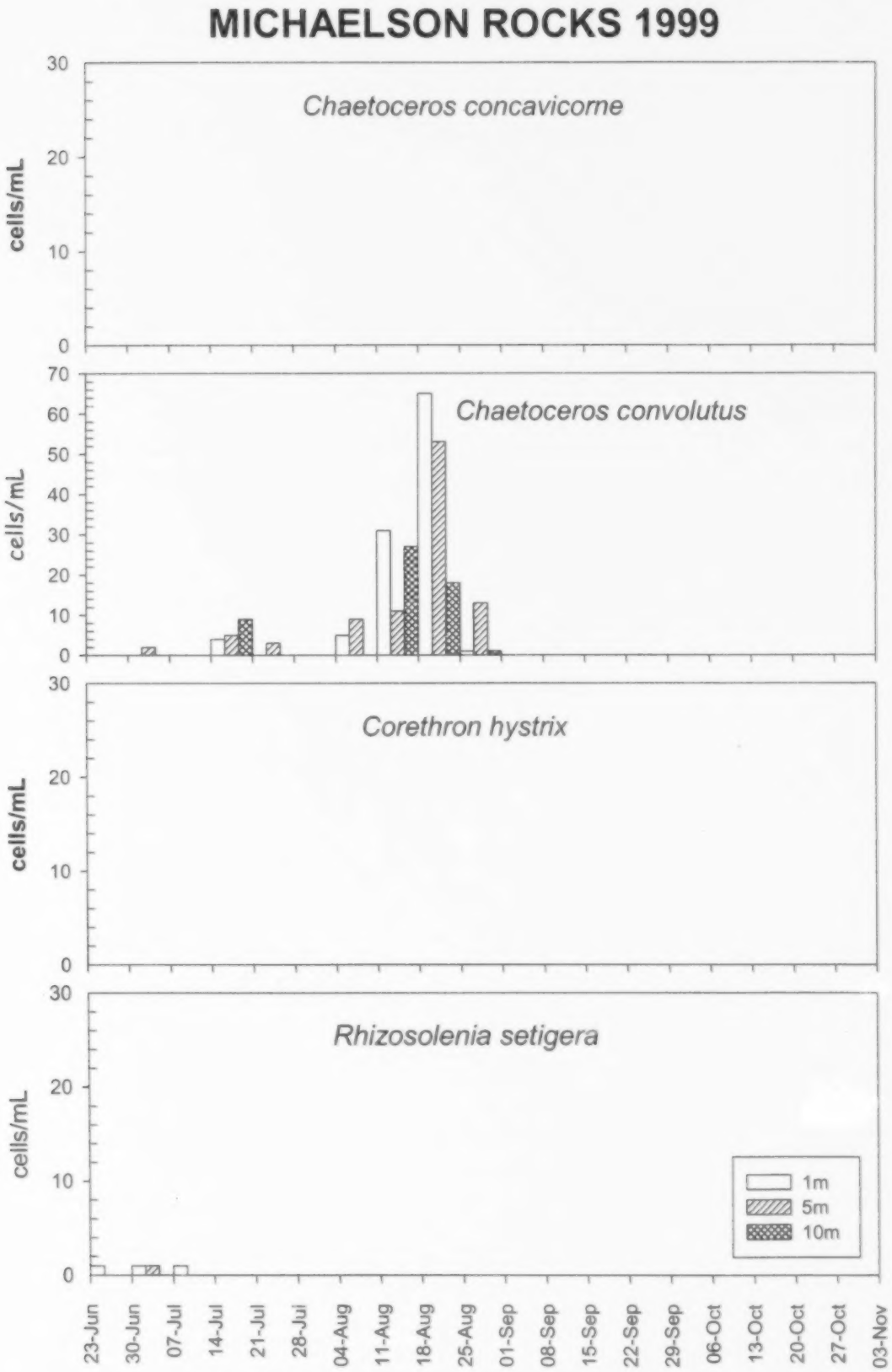

Figure 24: Harmful phytoplankton species in Michaelson Rocks samples.

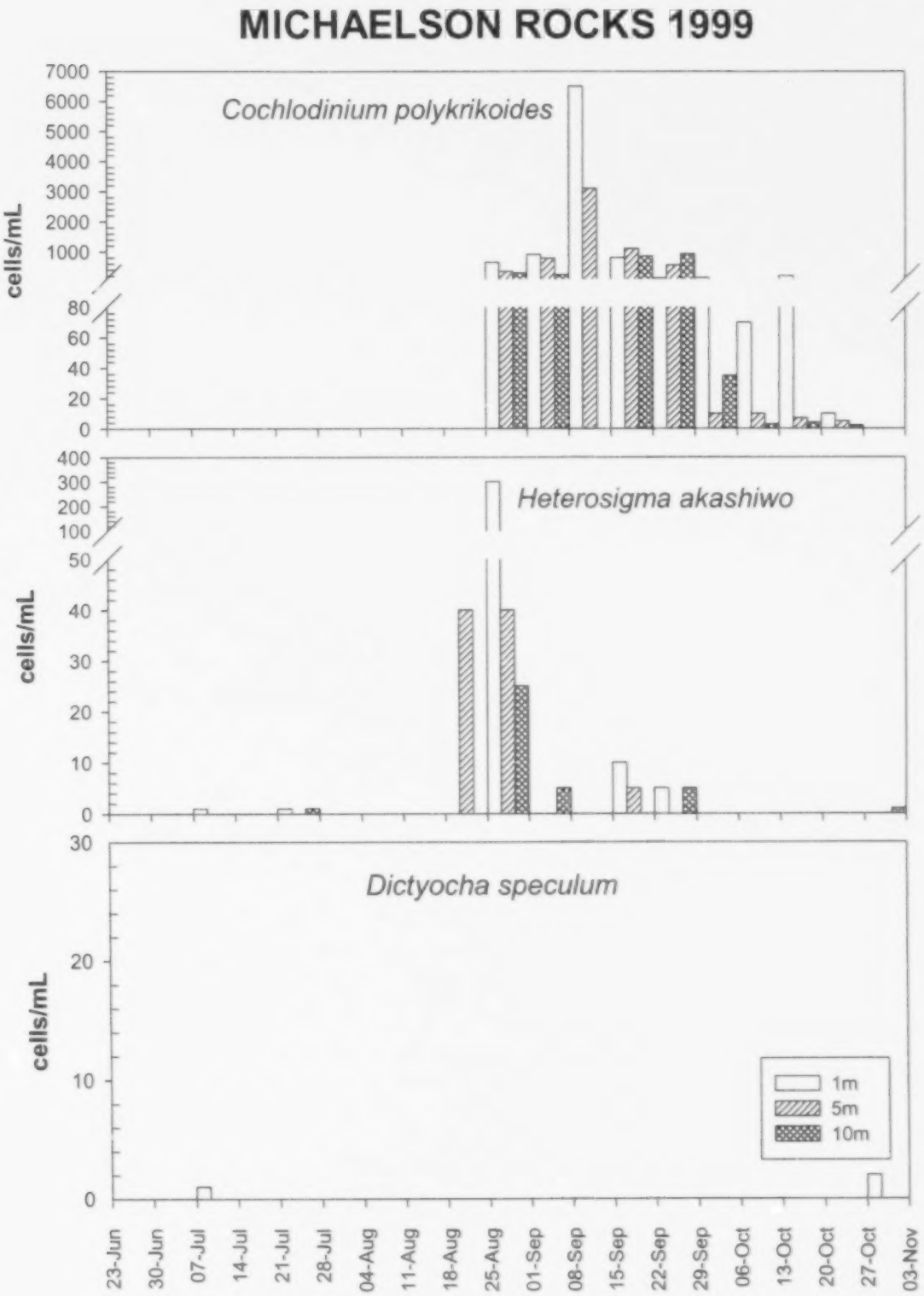

Figure 25: Harmful phytoplankton species in Michaelson Rocks samples.

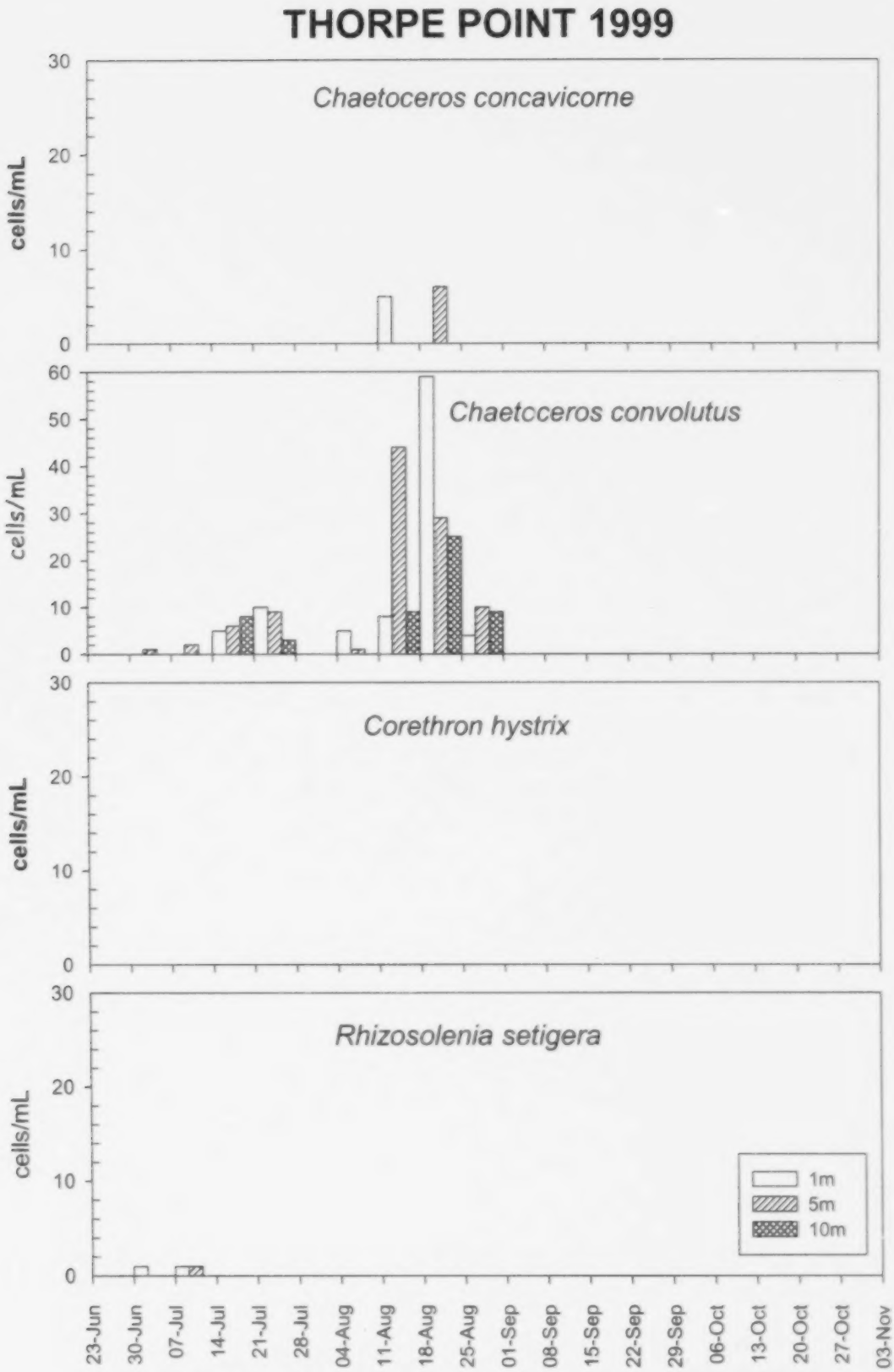

Figure 26: Harmful phytoplankton species in Thorpe Point samples.

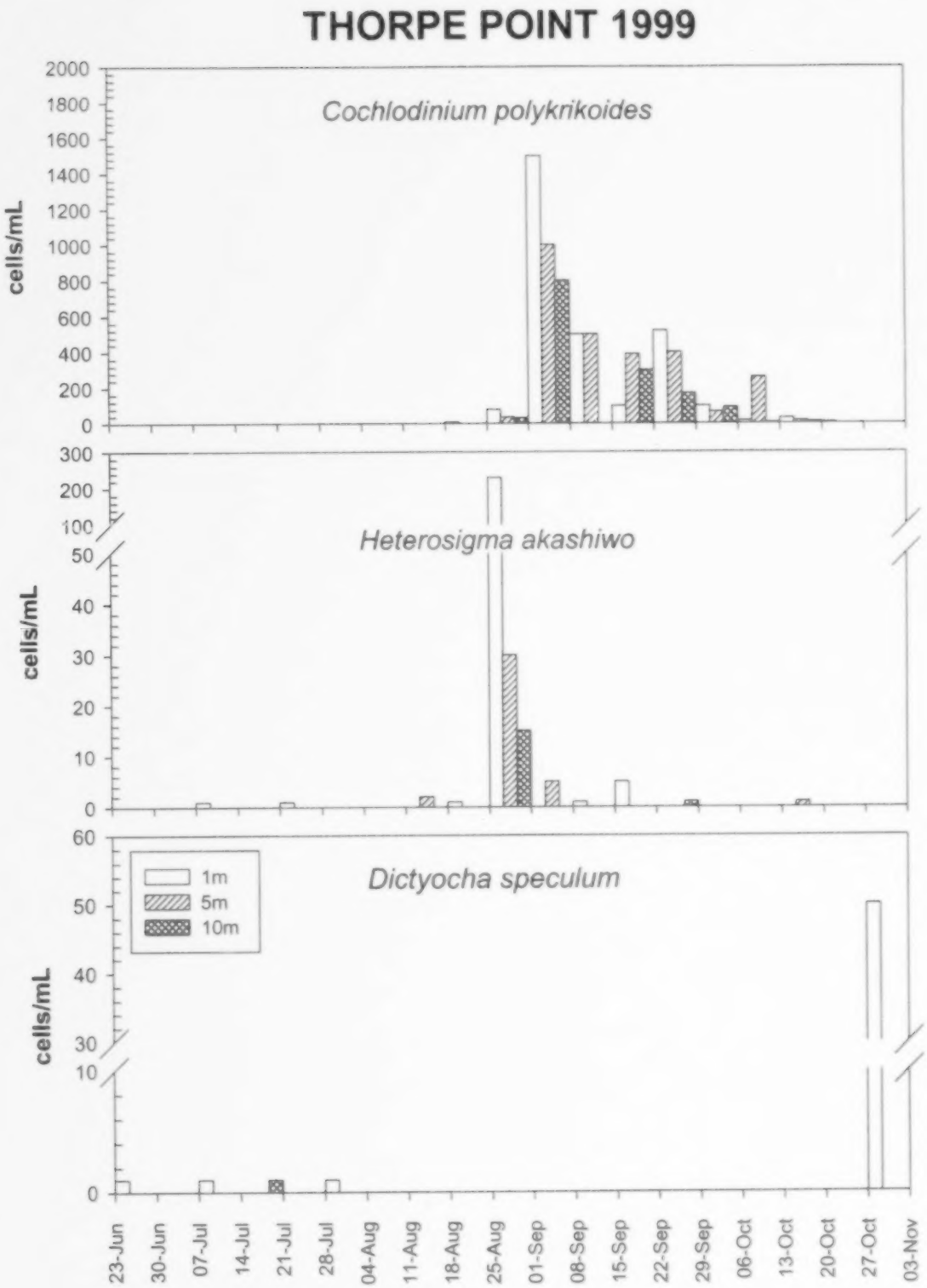

Figure 27: Harmful phytoplankton species in Thorpe Point samples.

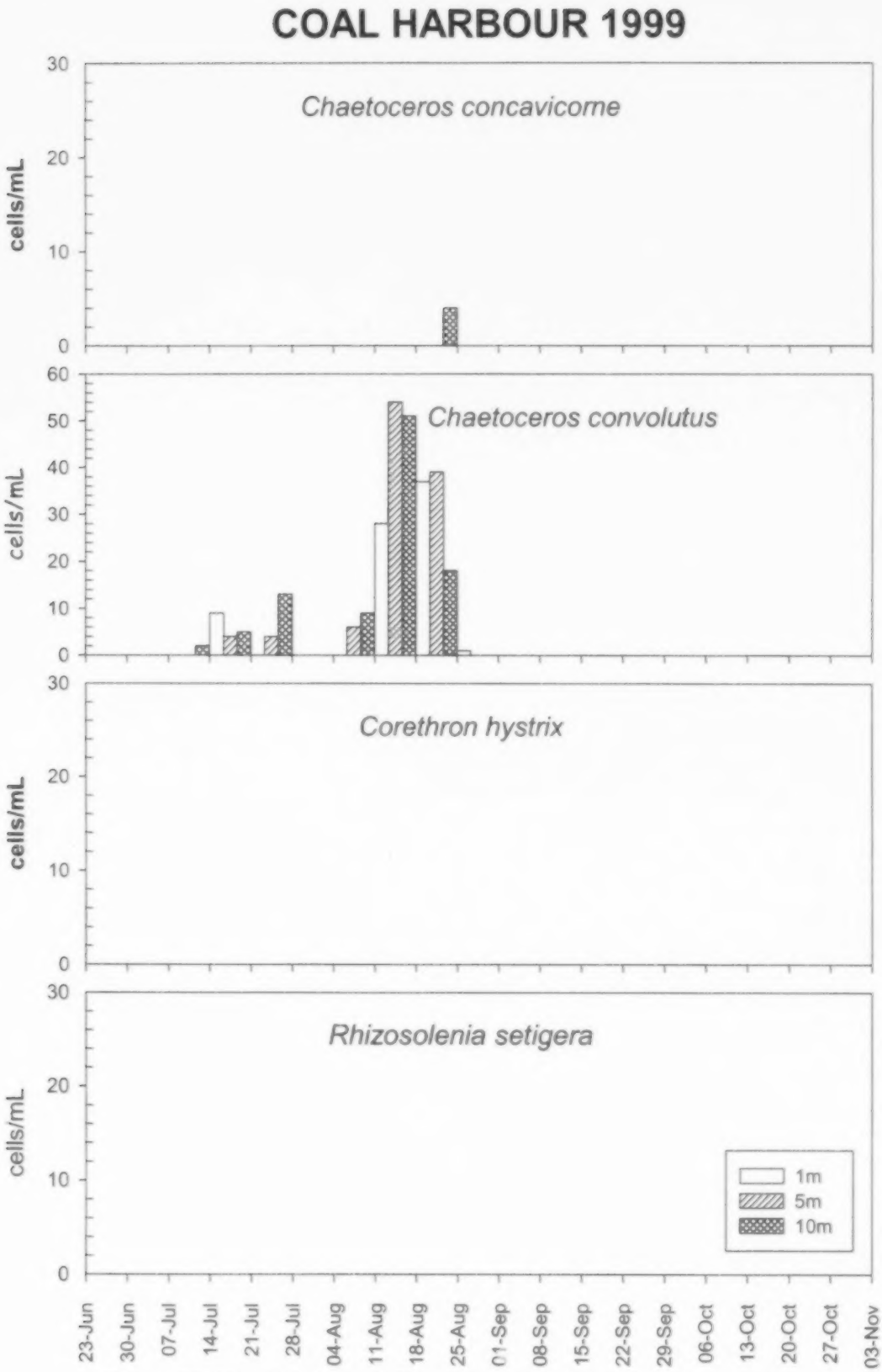

Figure 28: Harmful phytoplankton species in Coal Harbour samples.

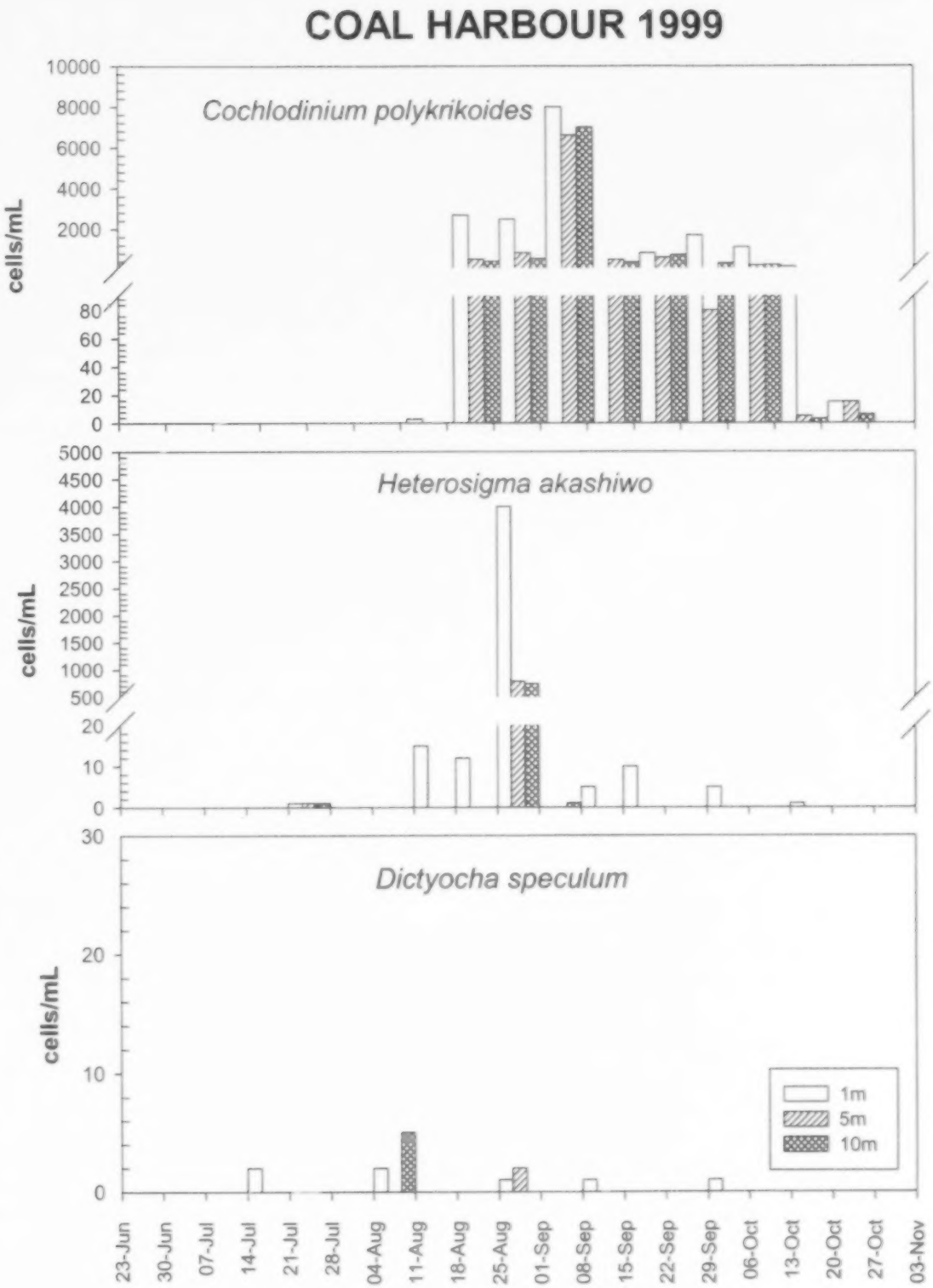

Figure 29: Harmful phytoplankton species in Coal Harbour samples.

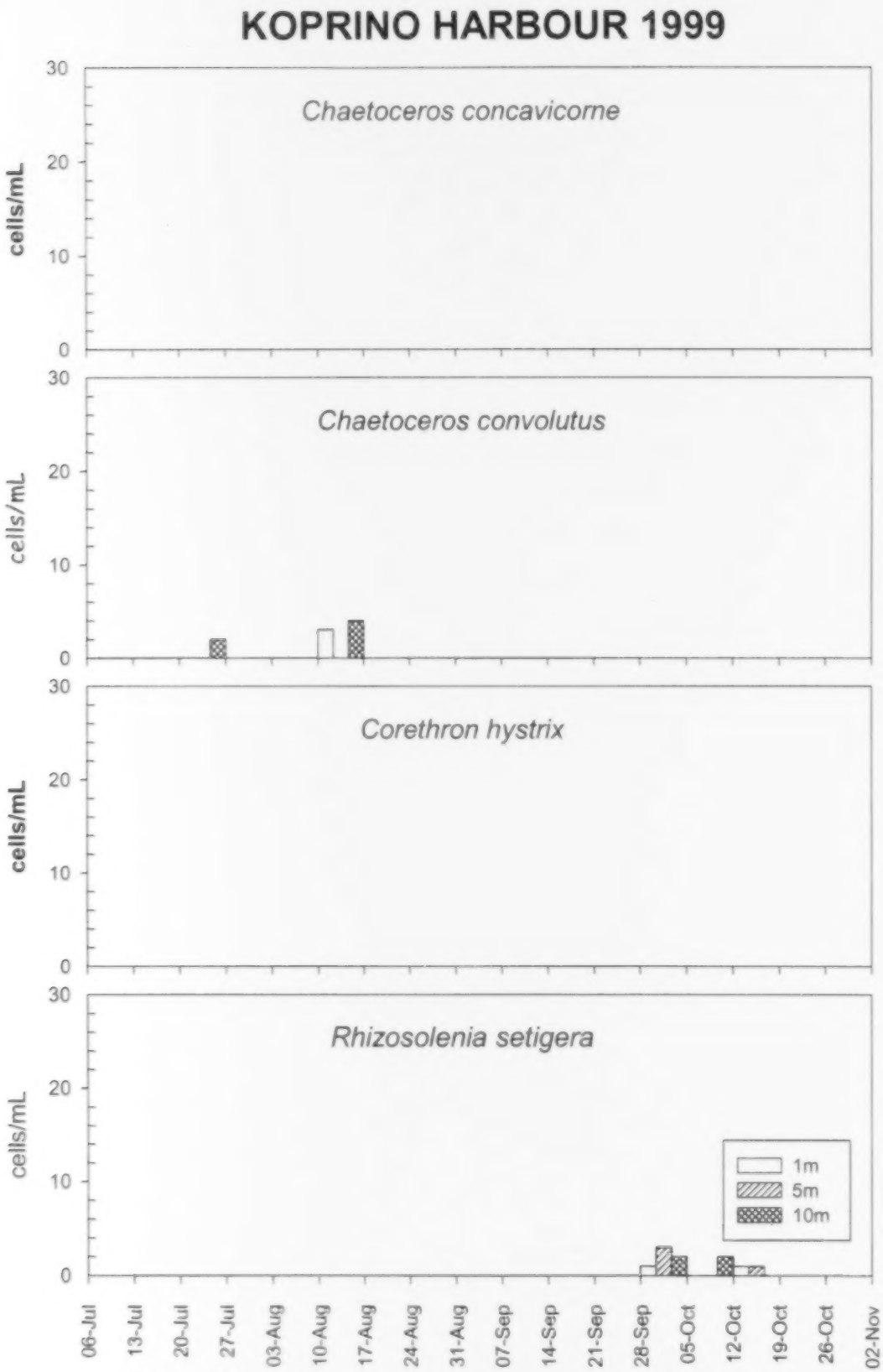

Figure 30: Harmful phytoplankton species in Koprino Harbour samples.

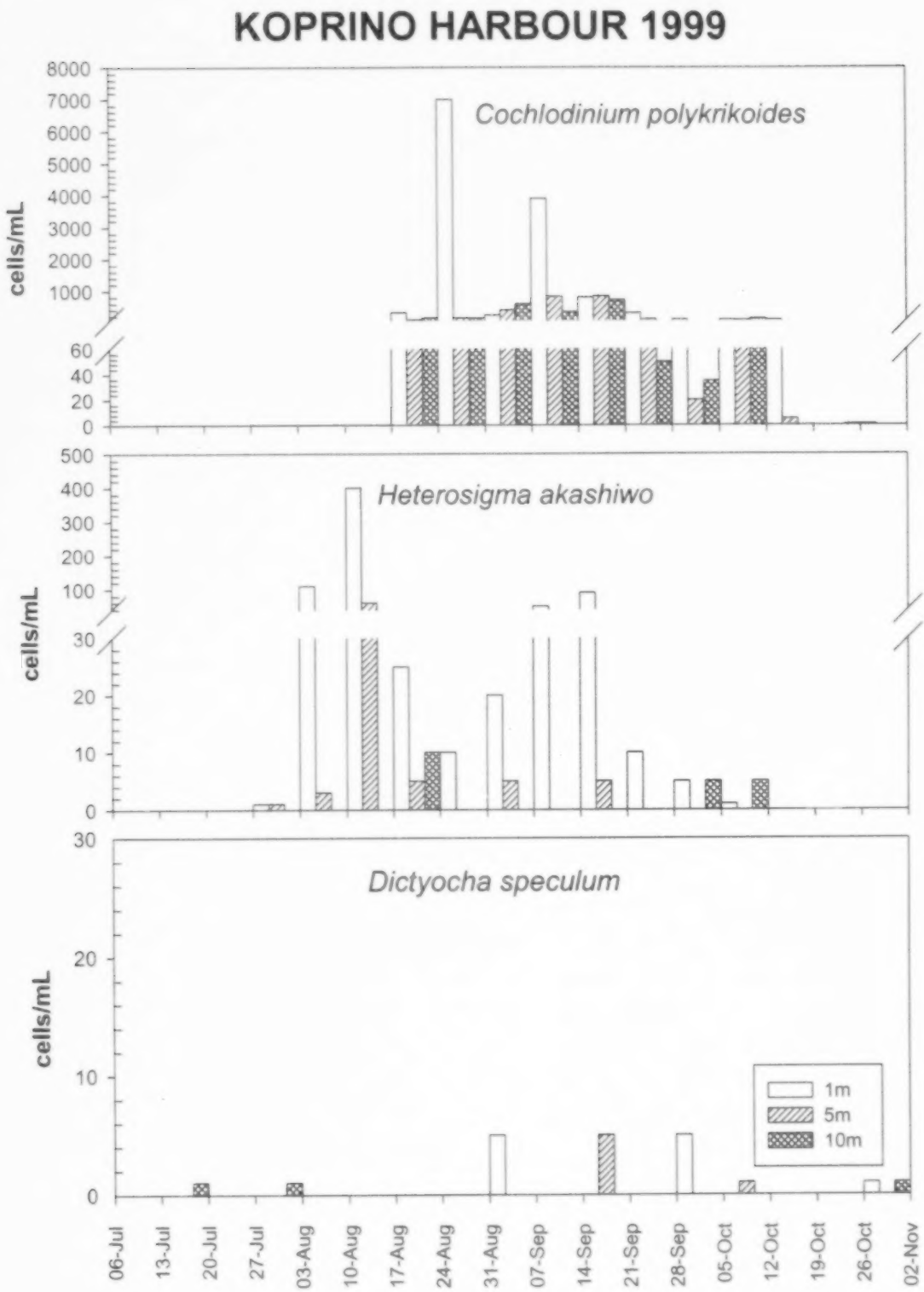

Figure 31: Harmful phytoplankton species in Koprino Harbour samples.

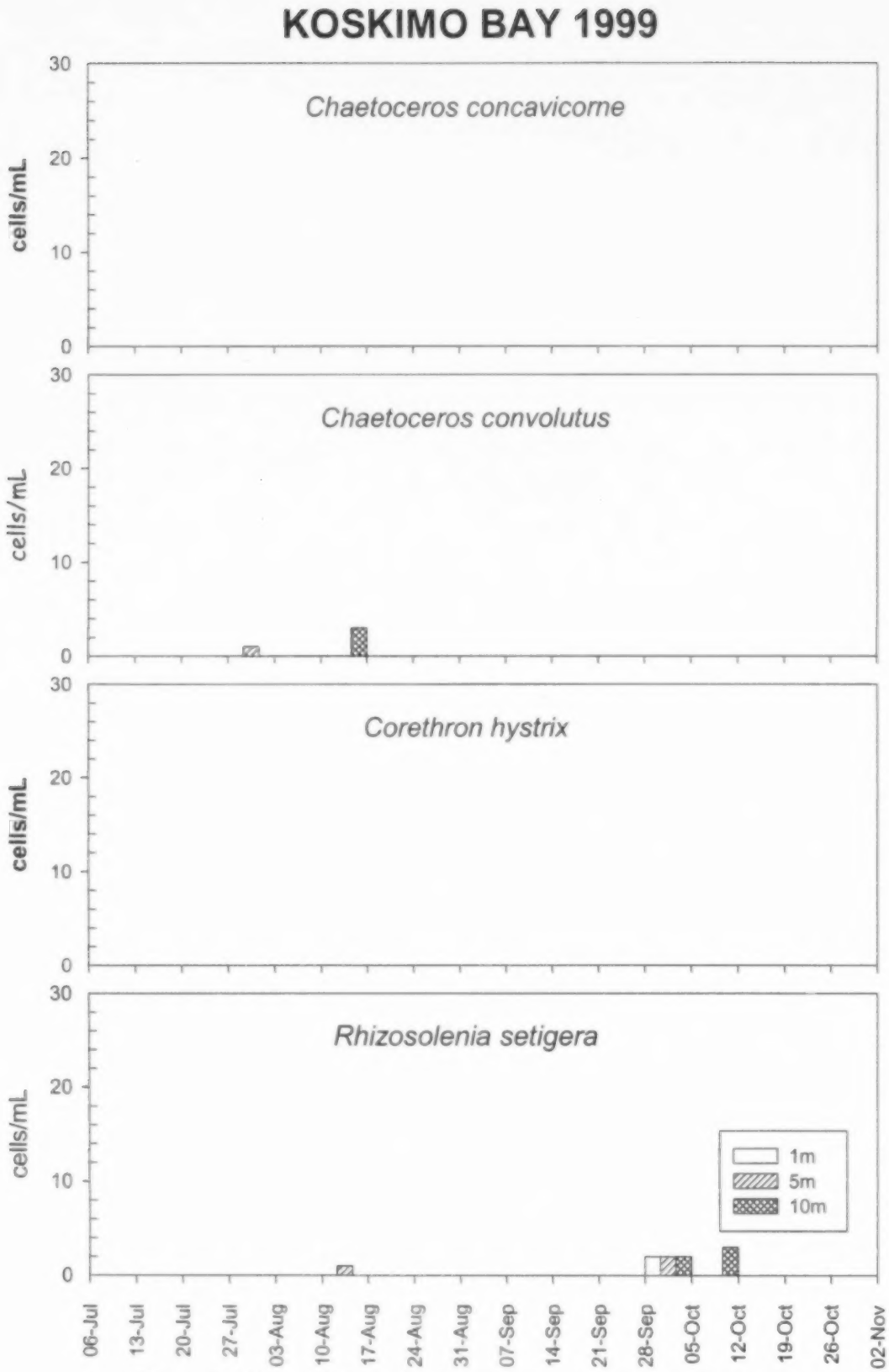

Figure 32: Harmful phytoplankton species in Koskimo Bay samples.

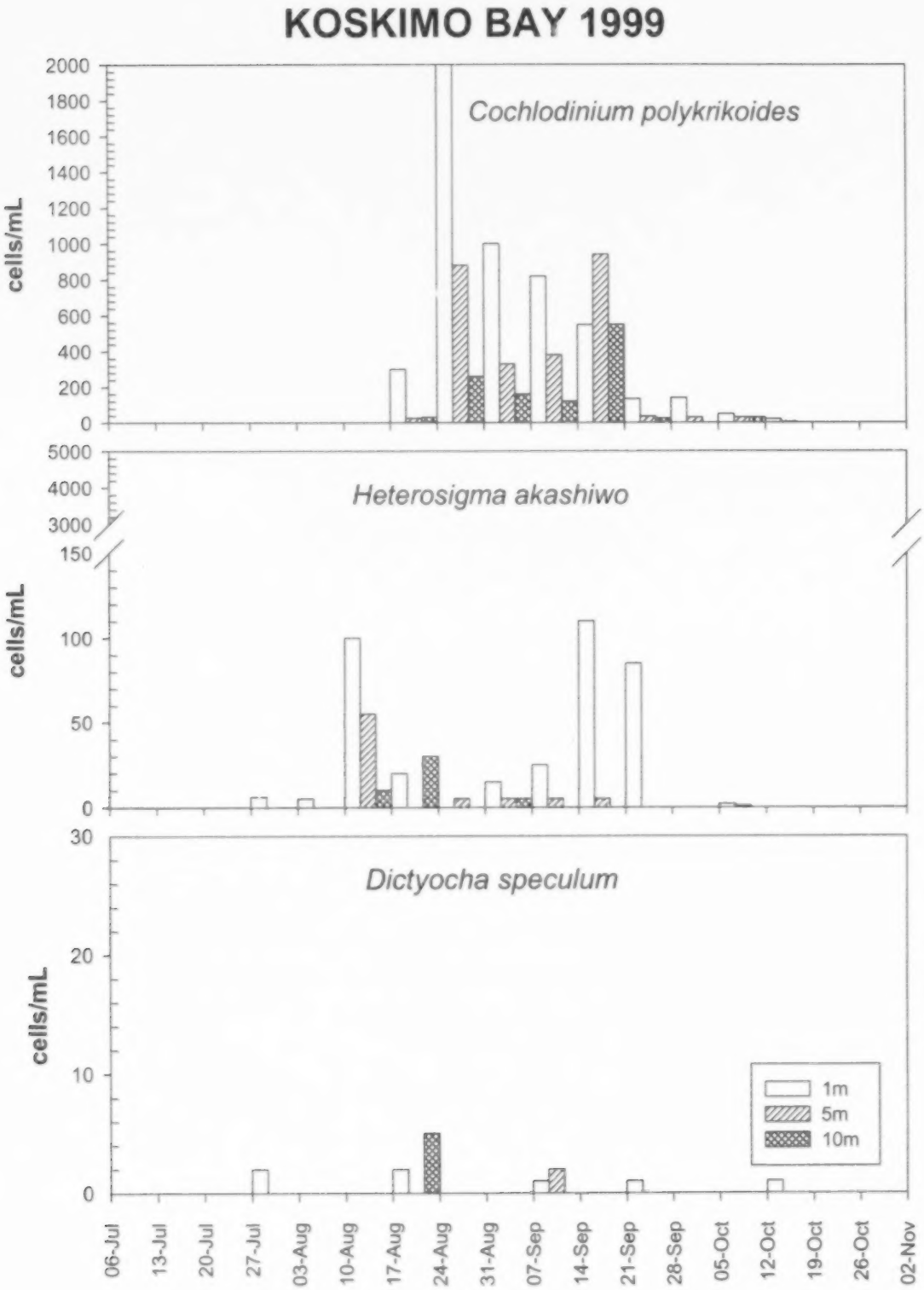

Figure 33: Harmful phytoplankton species in Koskimo Bay samples.

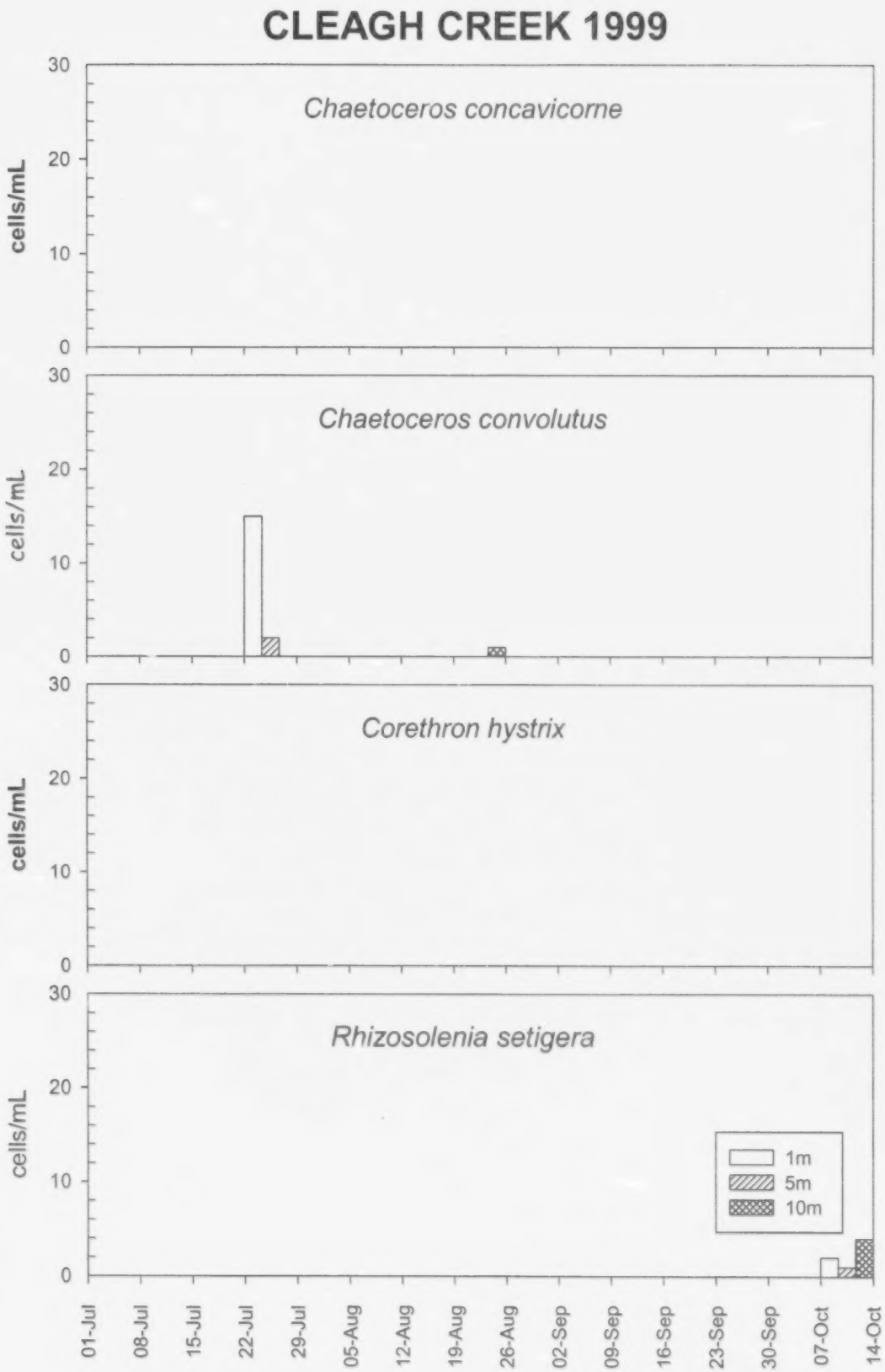

Figure 34: Harmful phytoplankton species in Cleagh Creek samples.

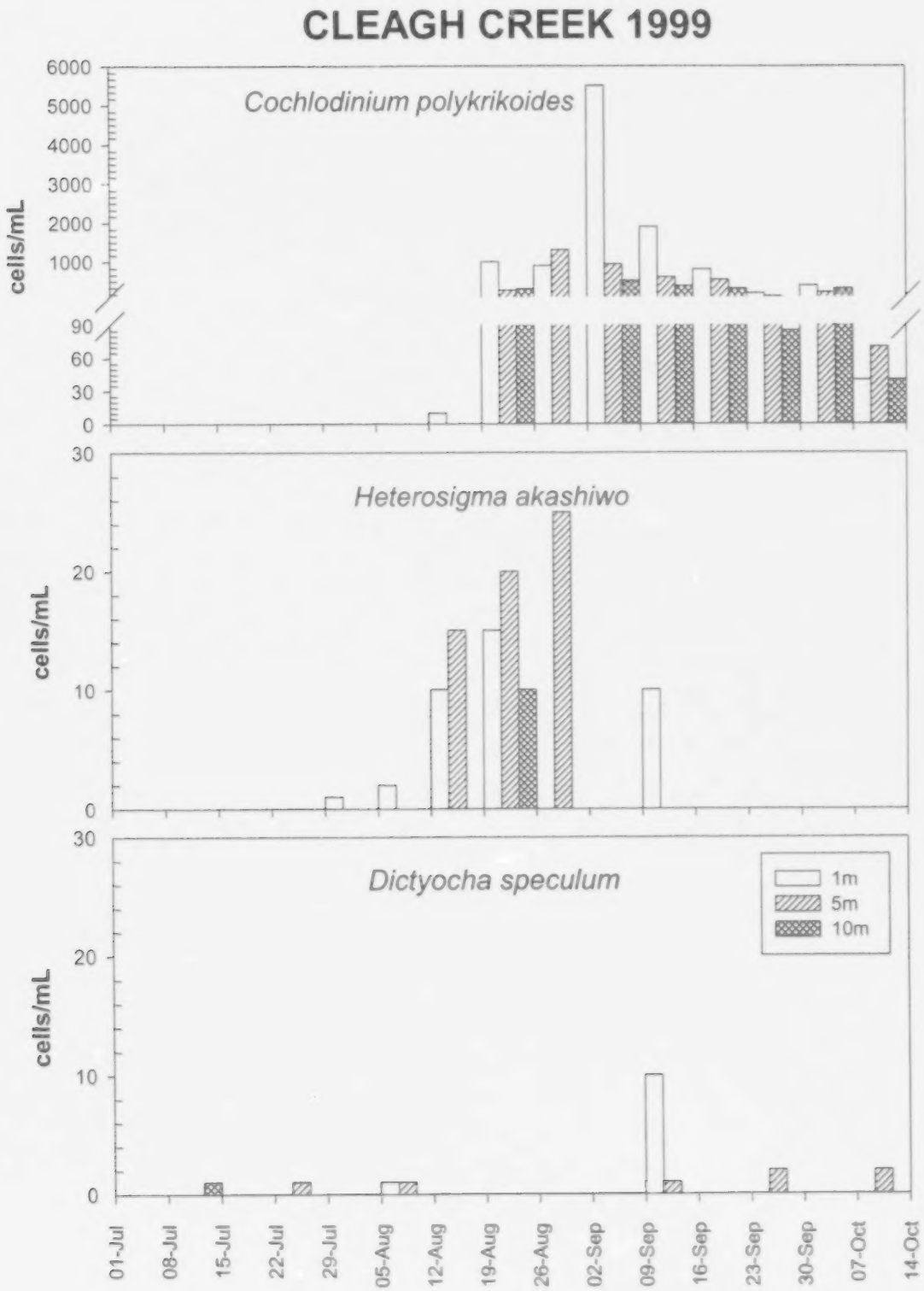

Figure 35: Harmful phytoplankton species in Cleagh Creek samples.

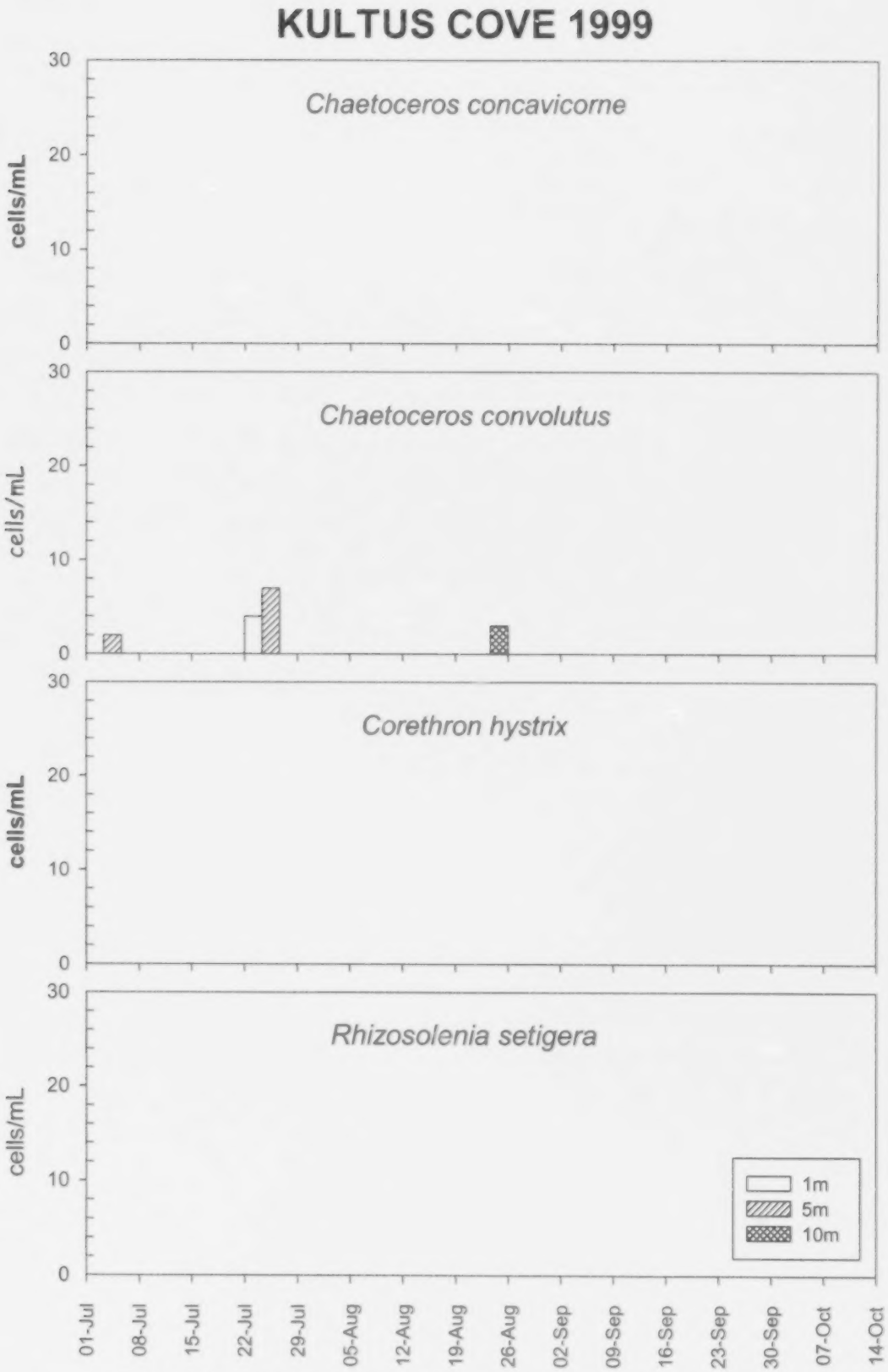

Figure 36: Harmful phytoplankton species in Kultus Cove samples.

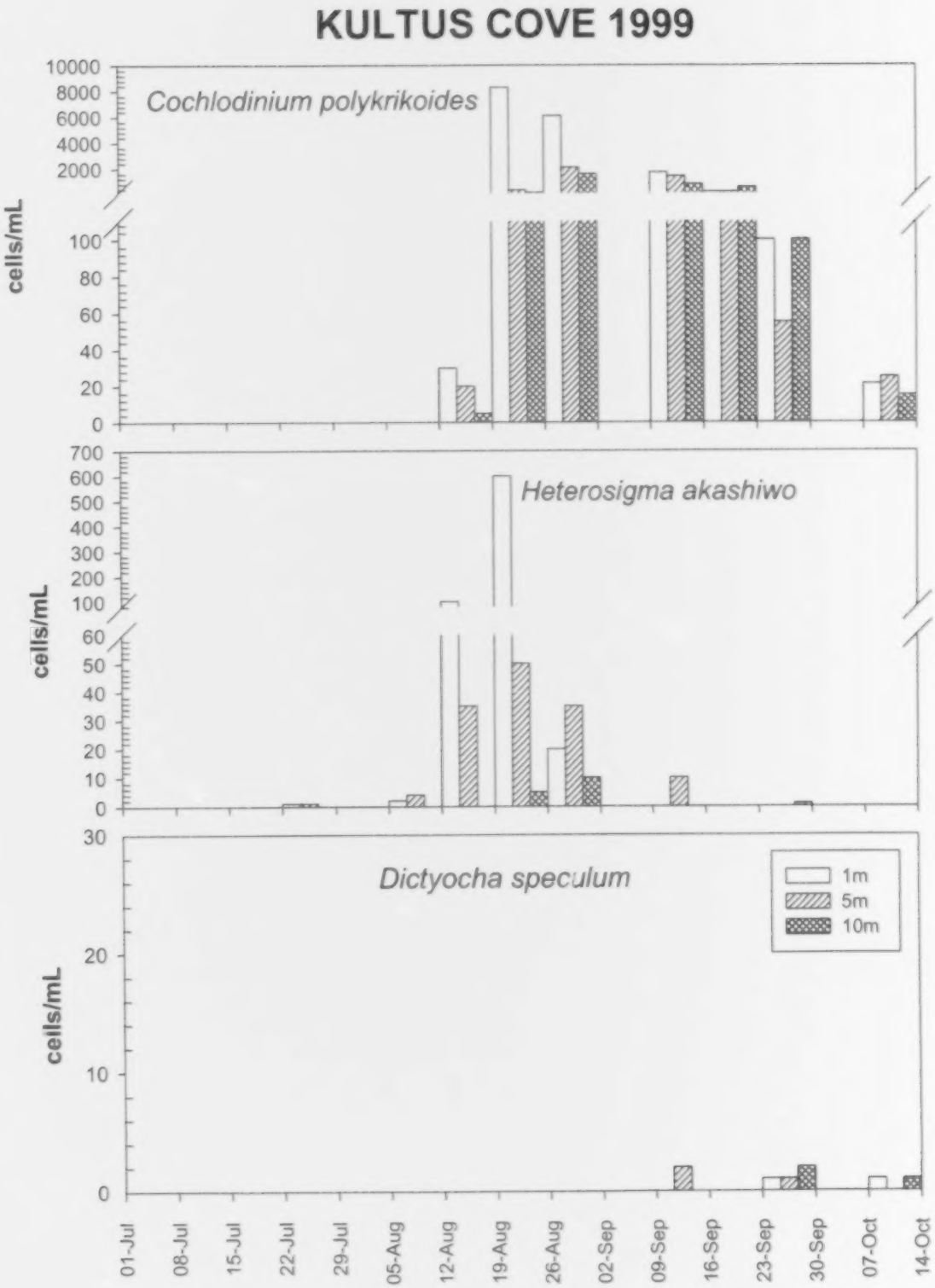

Figure 37: Harmful phytoplankton species in Kultus Cove samples.

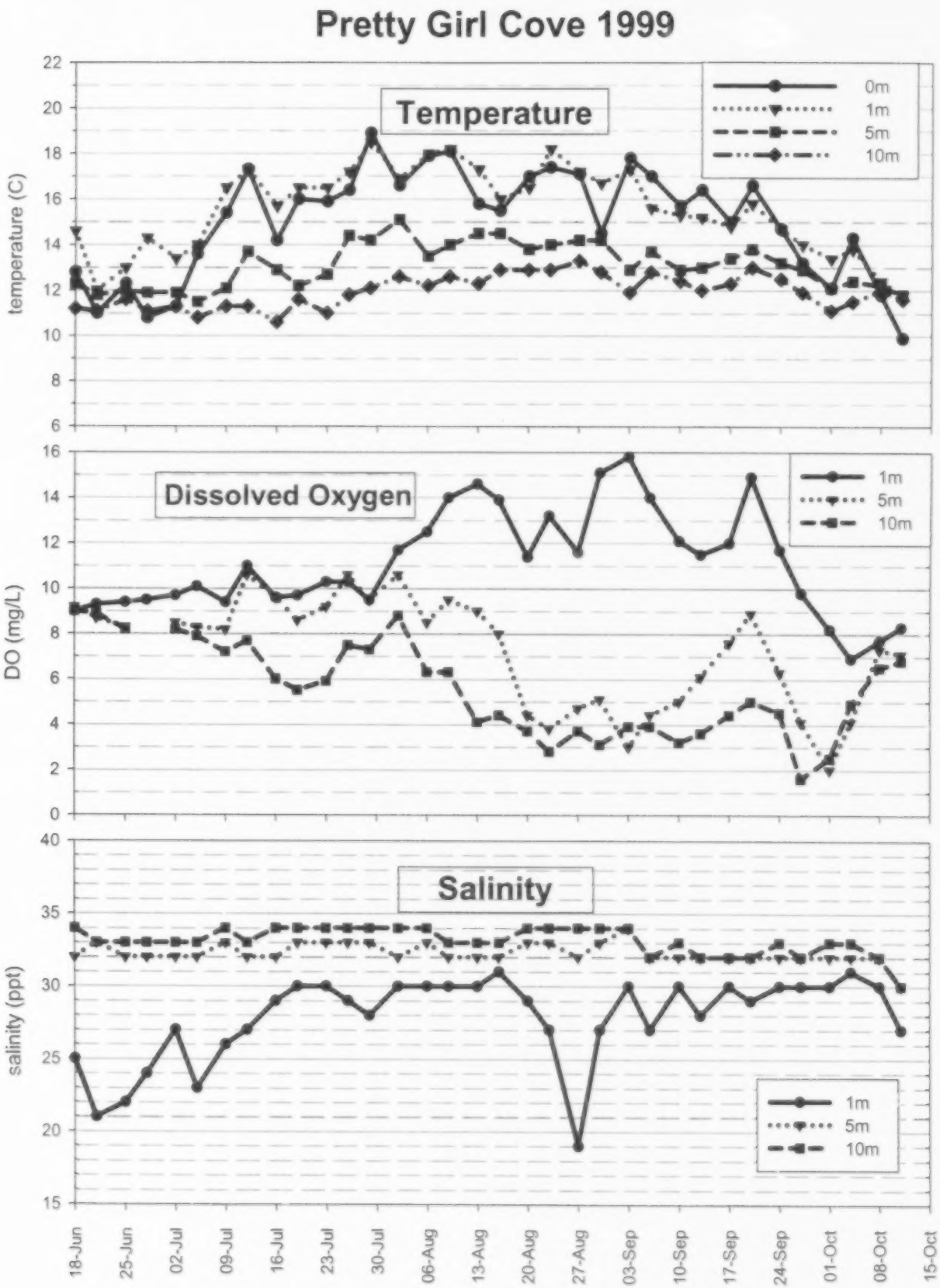

Figure 38: Environmental monitoring data for Pretty Girl Cove.

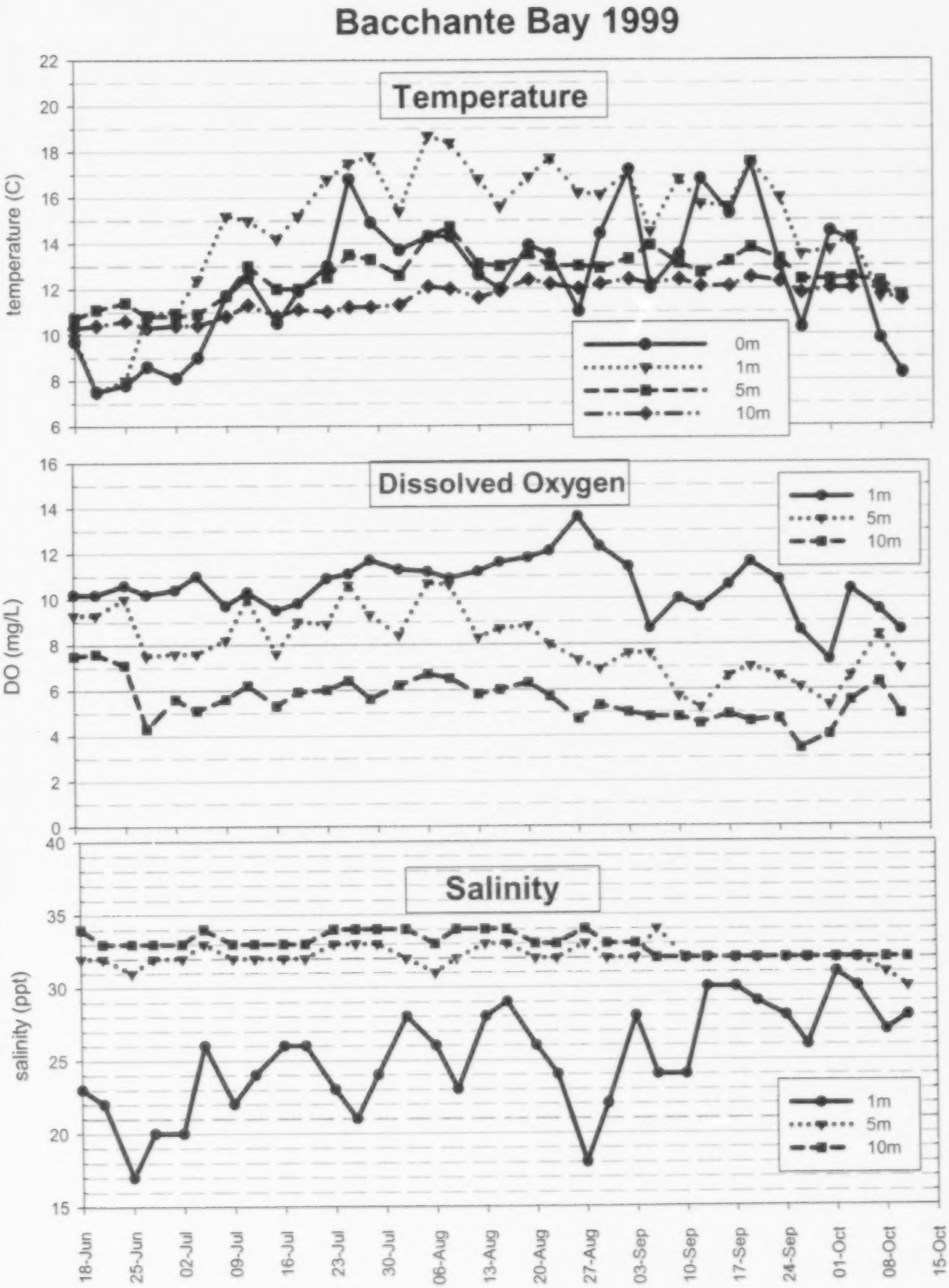

Figure 39: Environmental monitoring data for Bacchante Bay.

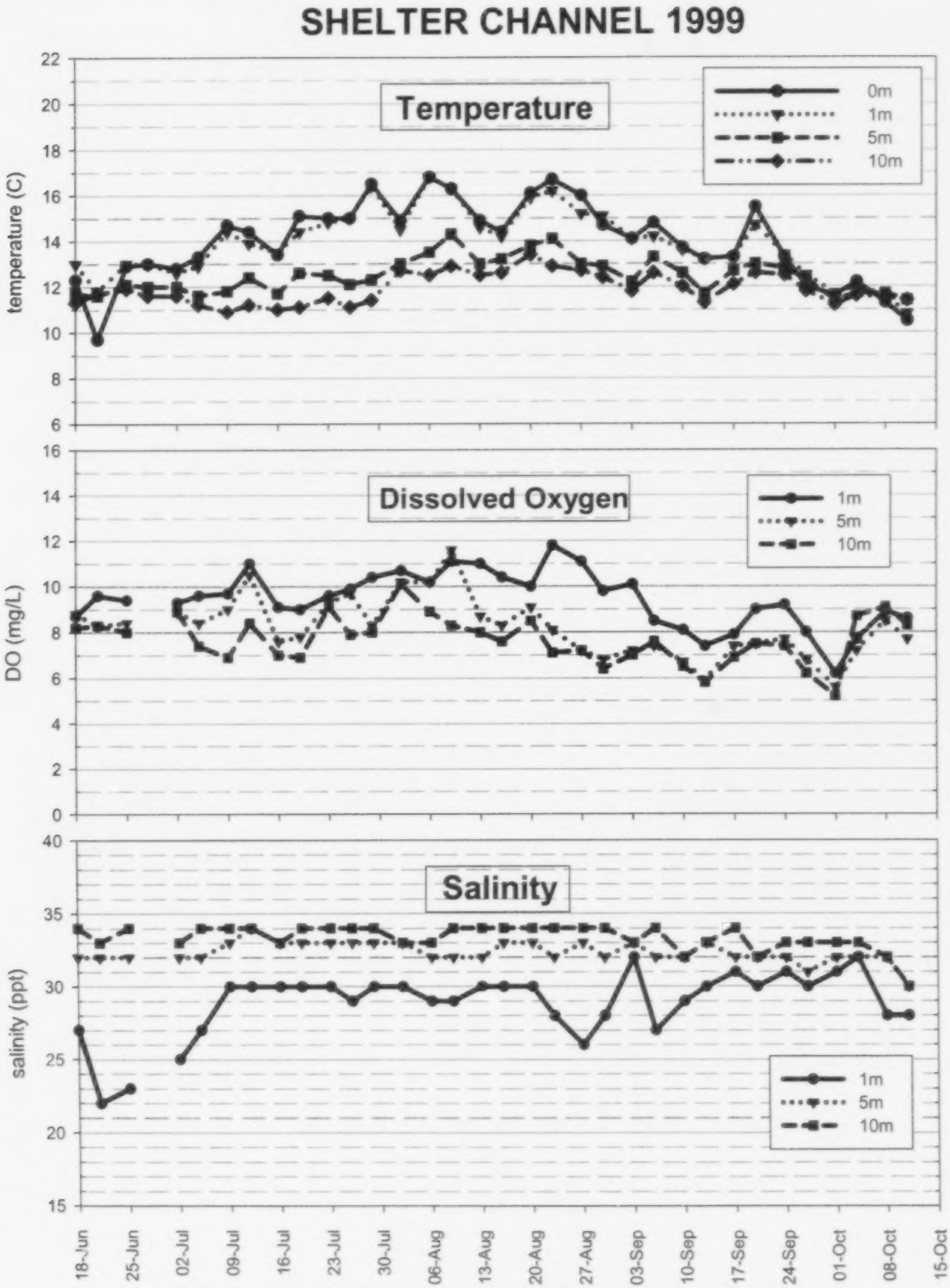

Figure 40: Environmental monitoring data for Shelter Channel.

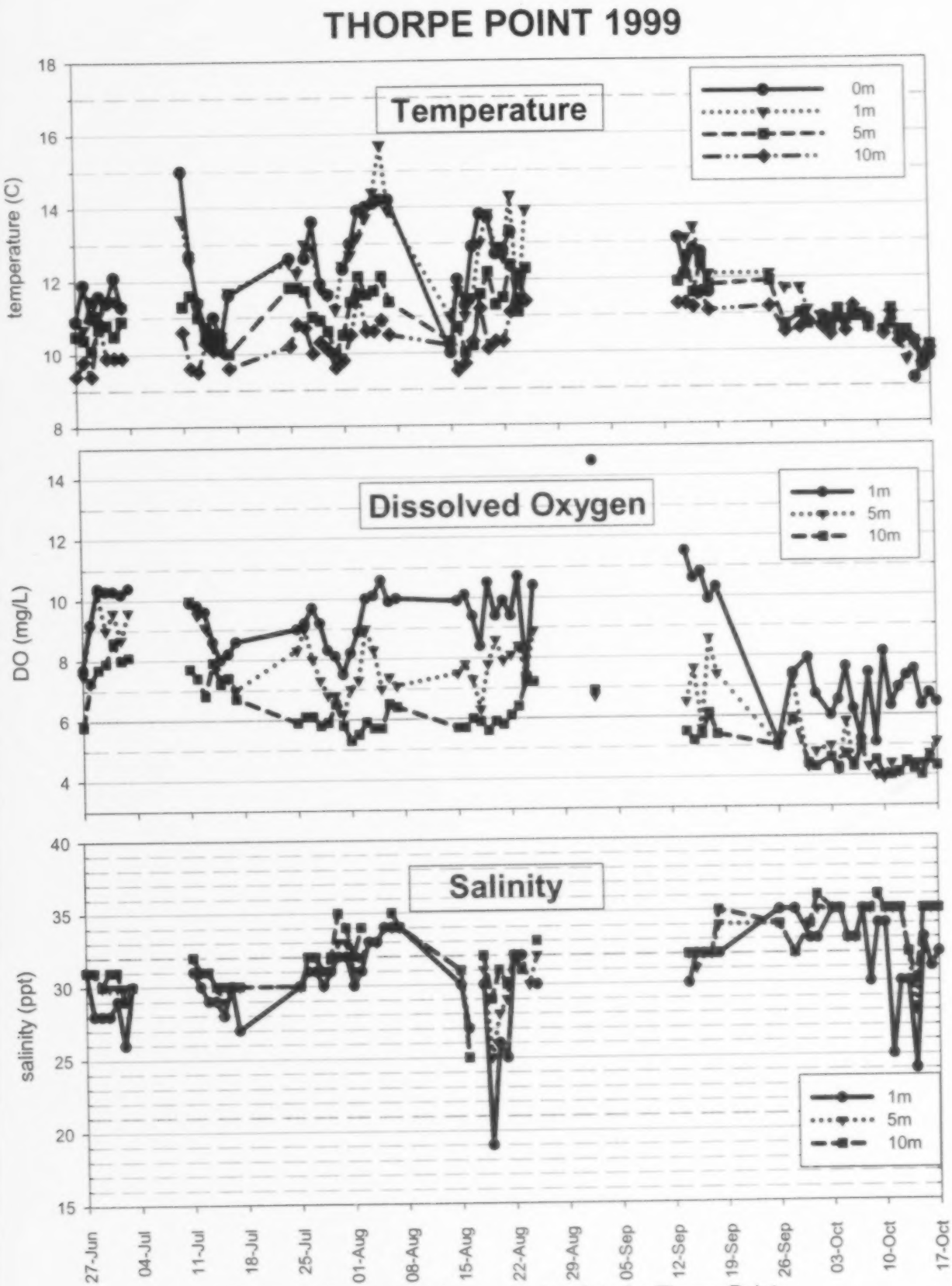

Figure 41: Environmental monitoring data for Thorpe Point.

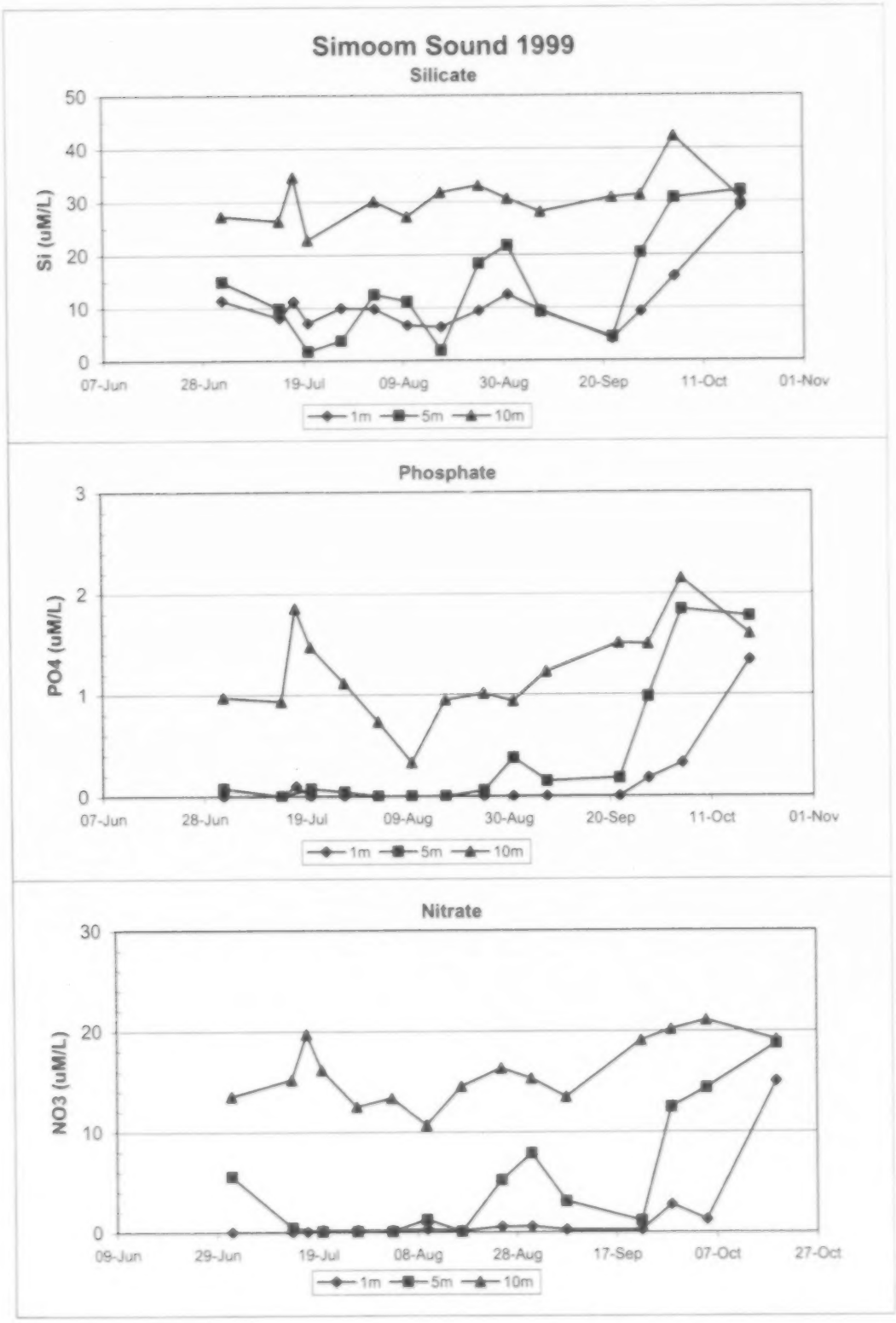

Figure 42: Nutrient concentrations in Simoom Sound samples.

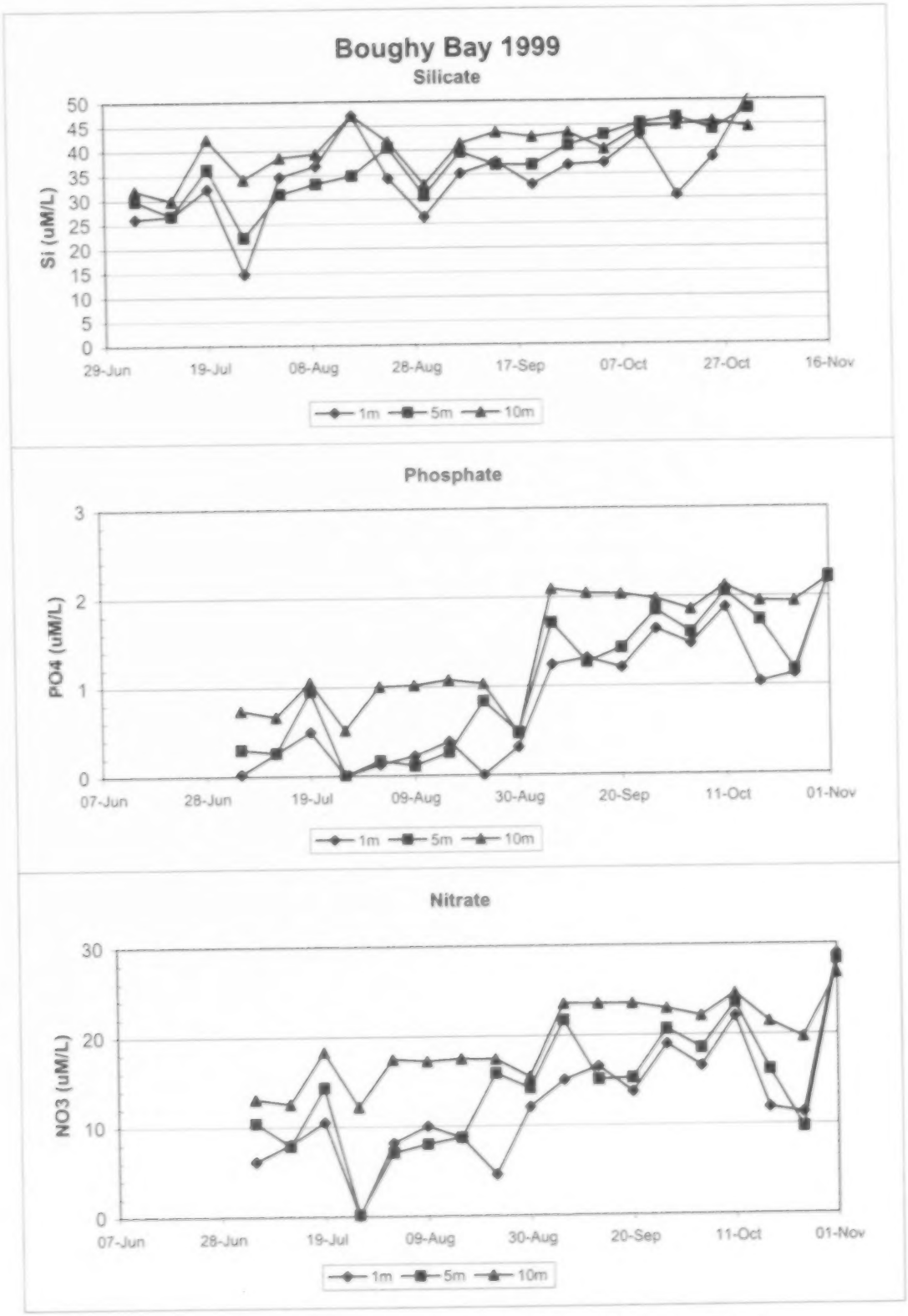

Figure 43: Nutrient concentrations in Boughy Bay samples.

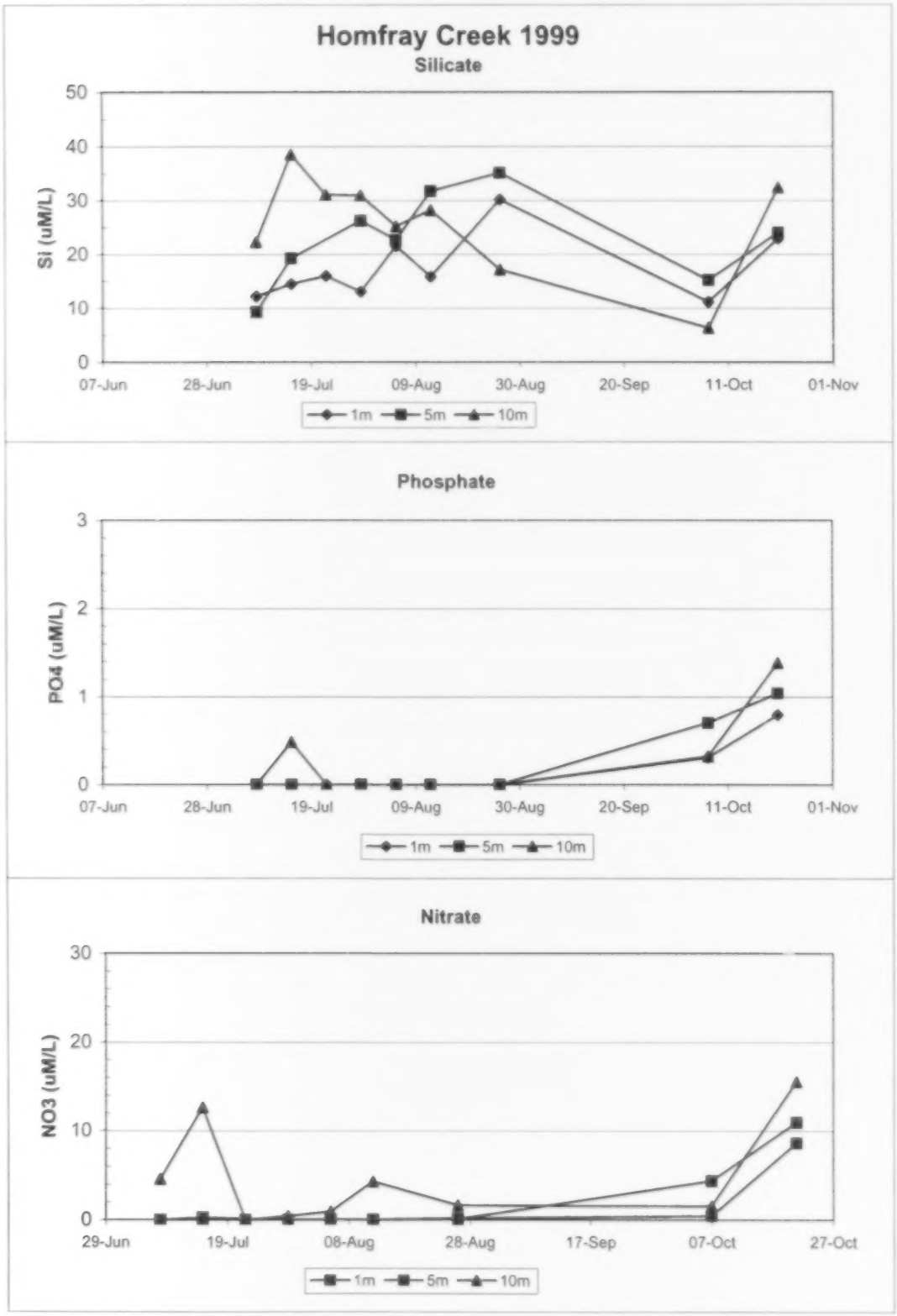

Figure 44: Nutrient concentrations in Homfray Creek samples.

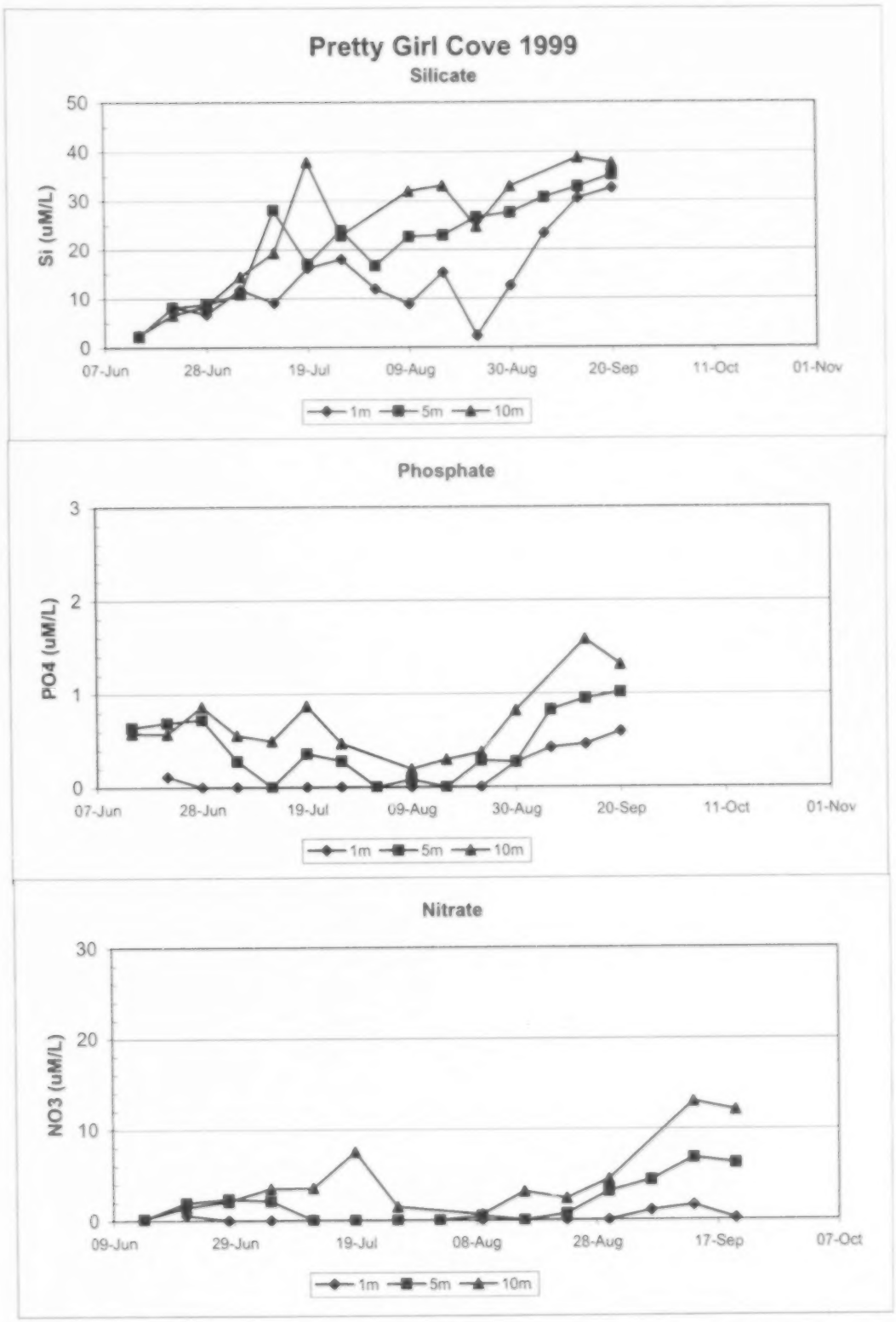

Figure 45: Nutrient concentrations in Pretty Girl Cove samples.

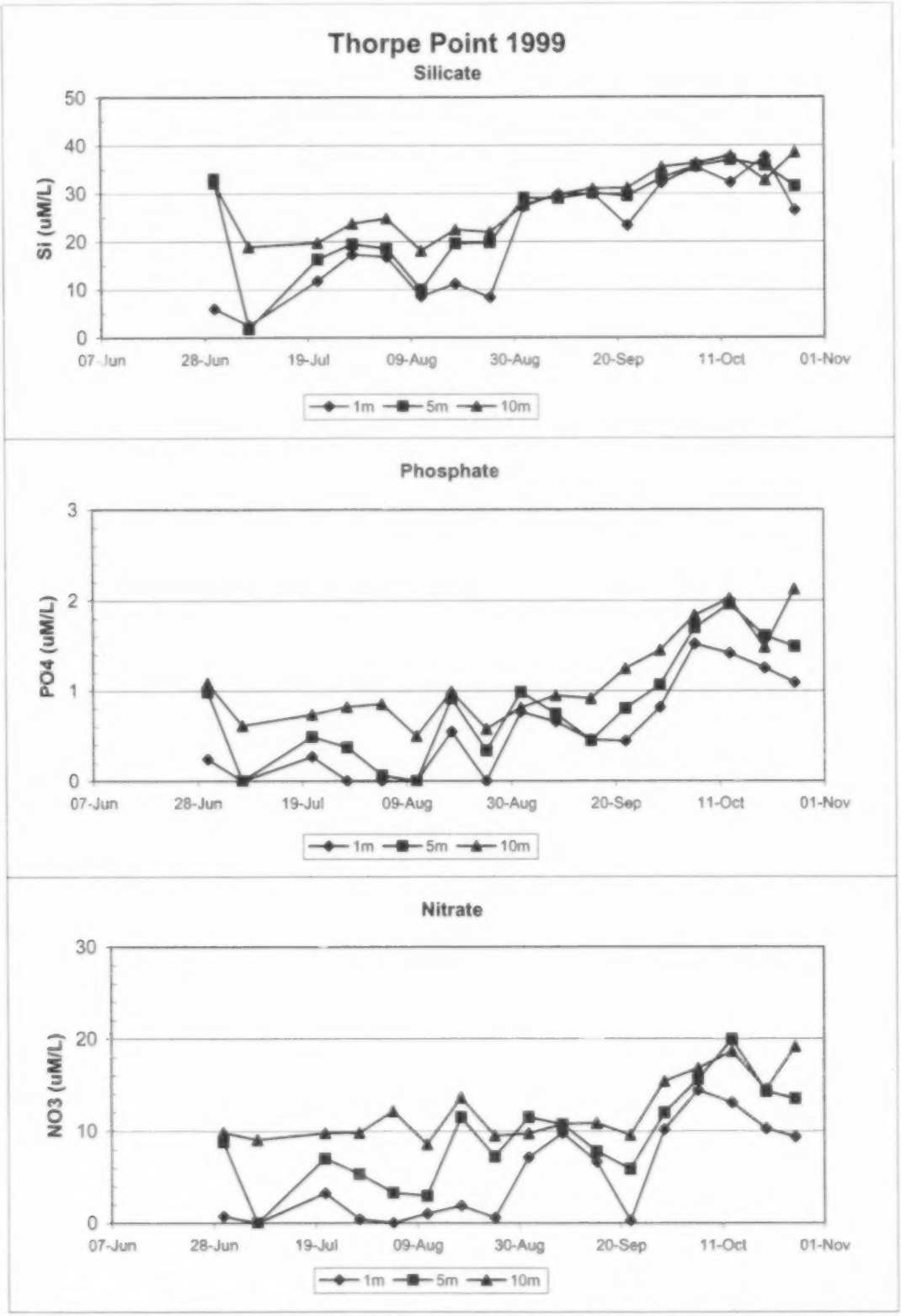

Figure 46: Nutrient concentrations in Thorpe Point samples.

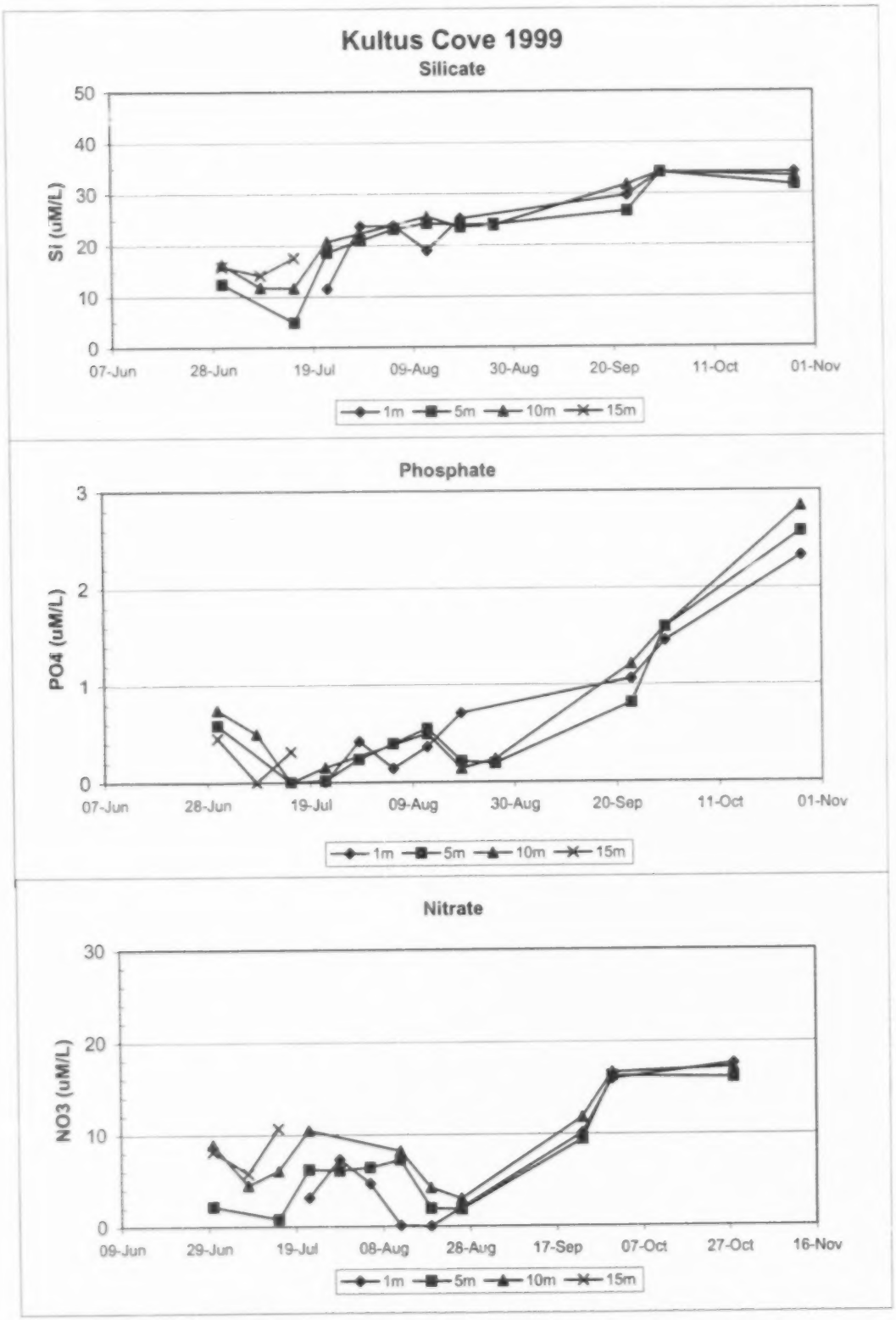

Figure 47: Nutrient concentrations in Kultus Cove samples.